

## CHEM4490 - Drugs, Toxins Natural Products Final Study List

Section	Topic
Adrenergic	adrenergic neurotransmission
Adrenergic	neurotransmitters (structure, effects, biochemistry, metabolism)
Adrenergic	adrenergic receptors: $\alpha_1$ , $\alpha_2$ , $\beta_1$ , $\beta_2$ (physiological effects)
Adrenergic	adrenergic agonists: catecholamines (examples, structures, effects)
Adrenergic	role of monoamine oxidase and Catecholamine O-methyl transferase
Adrenergic	Adrenergic antagonists (blockers): effects, disadvantages
CNS	Neurotransmission in the CNS: comparison to peripheral
CNS	anti-anxiety: Benzodiazepines (effects, biochemistry, disadvantages)
CNS	anti-anxiety: Barbiturates (effects, biochemistry, disadvantages)
CNS	Other CNS sedatives: alcohol, antihistamines
CNS	stimulants: Methylxanthines (structure, effects, biochemistry, disadvantages)
CNS	stimulants: nicotine (structure, effects, biochemistry, disadvantages)
CNS	stimulants: cocaine (effects, biochemistry, disadvantages)
CNS	stimulants: amphetamine (structure, effects, biochemistry, disadvantages)
CNS	Hallucinogens: LSD, Tetrahydrocannabinol, PCP (effects, biochemistry)
CNS	Preanesthetics: examples & uses
CNS	General Anesthetics (structure, effects, biochemistry, disadvantages)
CNS	Local Anesthetics (examples, effects, biochemistry, disadvantages)
CNS	Antidepressants: tricyclics (structure, effects, biochemistry, disadvantages)
CNS	Antidepressants: SSRI's (examples, effects, biochemistry, disadvantages)
CNS	Antidepressants: MAOI's (examples, effects, biochemistry, disadvantages)
CNS	Lithium Salts (use, biochemistry, disadvantages)
CNS	Neuroleptics (use, examples, biochemistry, disadvantages)
Opioids	Opium: Definition, source, traditional uses
Opioids	Morphine (structure, effects, biochemistry, disadvantages)
Opioids	Codeine (structure, effects, biochemistry, disadvantages)
Opioids	Heroin (structure, effects, biochemistry, disadvantages)
Opioids	analgesic receptors: $\mu$ , $\kappa$ , $\delta$ , $\sigma$ (biochemistry, roles)
Opioids	opiate agonists & antagonist (methadone, naloxone) uses
Analgesics	Pain, Inflammation & fever (physiology & biochemical basis)
Analgesics	prostaglandins & histamines (structure, synthesis, source, biochemistry)
Analgesics	NSAIDs: examples, structures, effects, biochemistry, disadvantages
Analgesics	Acetaminophen (structure, effects, biochemistry, disadvantages)
Analgesics	COX-2 inhibitors (Vioxx, Celebrex, etc.) advantages & disadvantages
Analgesics	Antihistamines: examples, effects, biochemistry, disadvantages
Steroids	Structural & Chemical characteristics
Steroids	chemical precursors, sites of synthesis, transport & excretion
Steroids	Biochemical activity
Steroids	Estrogens: major compounds, sites of synthesis
Steroids	Estrogens: physiological activity (male & female)
Steroids	Estrogens: therapeutic activity, potential disadvantages, antagonists
Steroids	Progestins: major compounds, sites of synthesis
Steroids	Progestins: physiological activity (male & female)
Steroids	Progestins: therapeutic activity, potential disadvantages, antagonists
Steroids	Androgens: major compounds, sites of synthesis
Steroids	Androgens: physiological activity (male & female)
Steroids	Androgens: therapeutic activity, disadvantages
Steroids	Adrenal corticosteroids: major compounds, sites of synthesis
Steroids	Adrenal corticosteroids: physiological activity
Steroids	Adrenal corticosteroids: Therapeutic roles & disadvantages