

# Classification of Hormones by Mechanism of Action

Hormones that bind to **intracellular** receptors  
(Steroid-Thyroid superfamily)

**1. Steroid Hormones:**

1. Glucocorticoids
2. Mineralocorticoids
3. Sex hormones:
  1. **Male sex hormones:** Androgens
  2. **Female sex hormones:** Estrogens & Progestins

**2. Thyroid Hormones (T3 & T4)**

**3. Calcitriol (1,25[OH]<sub>2</sub>-D<sub>3</sub>)**

**4. Retinoic acid**

Hormones that bind to cell surface receptors



cAMP	cGMP	calcium or phosphatidylinositol (or both)	tyrosine kinase cascade
1- Catecholamines ( $\alpha$ 2 - Adrenergic) 2- Catecholamines ( $\beta$ - Adrenergic) 3- Anterior Pituitary: ACTH, FSH, LH & TSH 4- ADH (Renal <b>V2</b> -receptor) 5- Calcitonin & PTH 6- Glucagon	1- Atrial natriuretic peptide (ANP) 2- NO	1- Acetylcholine (muscarinic) 2- Catecholamines ( $\alpha$ 1 - Adrenergic) 3- Angiotensin II 4- ADH (vasopressin): Extra-renal <b>V1</b> -receptor	1- GH & Prolactin 2- Insulin 3- Erythropoietin