B.Sc (H) Zoology
Part - II
Paper IV
Dr. Prabhat Rayan
Dept of Zoology
Raja Singh College
Siwan

Classification of Hormones

- Study of hormone is called Endocrinology
- Endocrinology defined as - the science dealing with the study of Endocrine glands and their role of their hormones
- The term hormone was coined by Starling & Baylis (1902) from a Greek word "Hormaein" meaning - "to set in motion"
- Chemically the hormones are Organic Substances - Circulating in the Body, but - act upon a specific distant Organ called "Target Organ".
- Hormone act as either Stimulating or Depressive effects.
- Previously, the term chalone was used for depressive effect.
- Hormones have wide range of action affecting almost all metabolic activities including Growth, Differentiation & Reproduction.

Classification

- The classification divided on the basis of Physical, chemical & Biochemistry
- The major class of Endocrine mediated effects are as follows.
- Kinetic Effect
- It controls pigment, Migration muscle contract & glandular Secretion.
- Metabolic effect
- It controls mainly of change in the rate & balance of secretion & contraction of tissue constituent.
- Morphogenetic:
  It controls Growth & Differentiation.

Effect of Vertebrates are as follows.

Class of effect	Effect upon target tissue,	Hormones
1. Kinetic	It effects on the target tissue	Epinephrine
	Colour differentiation & muscles	Epilatonin etc
2. Metabolic	It controls, reproductive cycle, respiratory function carbohydrate & protein metabolism	FSH, TSH, ADH, Calatonin
3. Morphogenetic	It controls general growth, counting, metamorphosis, development (SSC)	GH, Thyroxine (T4) FSH, LH

Biochemical classification

All hormones depends upon their chemical structure. It is classified under the following categories

Categories	Hormones
— Phenolic hormones	Adrenalin (Epinephrine), Nor adrenalin, (Nor epinephrine)
— Proteinaceous or Polypeptide hormone,	FSH (Follicle Stimulating hormone), LH (Luteinizing hormone)
— Glycoproteinous hormone.	

Classification of hormones on the basis of Endocrine glands

Name of Glands	Hormones (Secreted)
— Pituitary gland. (Ant. lobe, Intermediate lobe, Posterior lobe)	GH (STH), TSH, ACTH LTH, MSH, ADH, Pituitrin (Oxytocin) etc
— Thyroid gland	Thyroxine hormone (T4) Tetraiodothyronine hormone

Adrenal Gland — Mineralocorticoides, Metabolocorticoides, Sex hormones, Epinephrine, or epinephrine,

Parathyroid gland — Parathormone, calcitonin.

Pancreas (Islets of Langerhans,
- α Cells (A-Cells) — Glucagon,
- β Cells (B-Cells) — Insulin
- δ-Cells (D-Cells) — Somatostatin

Gastrointestinal (Duodenum, Small intestine) — Gastrin, Enterogastrone
- Cholecystokinin,
- Pancreozymin, etc

- Thymus — Thymosin
- Pineal body — Melatonin