Endocrinology

The branch of biology which deals about all aspects of endocrine glands & their secretions.

Thomas Addison – Father of endocrinology.

Glands :- The cells, tissues or organs secrete a chemical or a set of chemicals are called glands.

On the basis of duct :-

Exocrine gland or Ductile gland :-

↳ The glands which have their own duct.

Endocrine gland or Ductless gland :-

↳ The glands which don't have duct.

Heterocrine gland or mixed gland :-

Exocrine tissue & Endocrine tissue.

History :-

W. M. Bayliss & E. H. Starling

1903 – "Secretin" (1st hormone) Discovered

Hormone (Gr. Harman – Excite or arouse)

Hormone	Enzyme
⇒ Hormones are secreted by endocrine glands.	⇒ Enzymes are secreted by exocrine glands
⇒ It may or may not come in contact of blood.	⇒ It never comes in contact of blood.
⇒ classic effect – Hormones are carried by blood.	
⇒ Paracrine effect – Hormones are carried by intercellular fluid	
⇒ Hormones are stimulatory & inhibitory in function.	⇒ Enzymes are only stimulatory in functions.
Eg: feedback Thyroid stimulating hormone: Pituitary → Thyroid → Thyroxine	
⇒ It requires in very less amount	⇒ Enzymes are required in large amount.
⇒ Site of formation & site of action may remain close or away from each other. That's why hormones are called chemical messengers.	⇒ Site of formation & site of action remain close together.
⇒ Hormones chemically it may be polypeptide, protein, steroid etc	⇒ Enzymes are chemically protein.

1905 E. H. Starling – Hormone