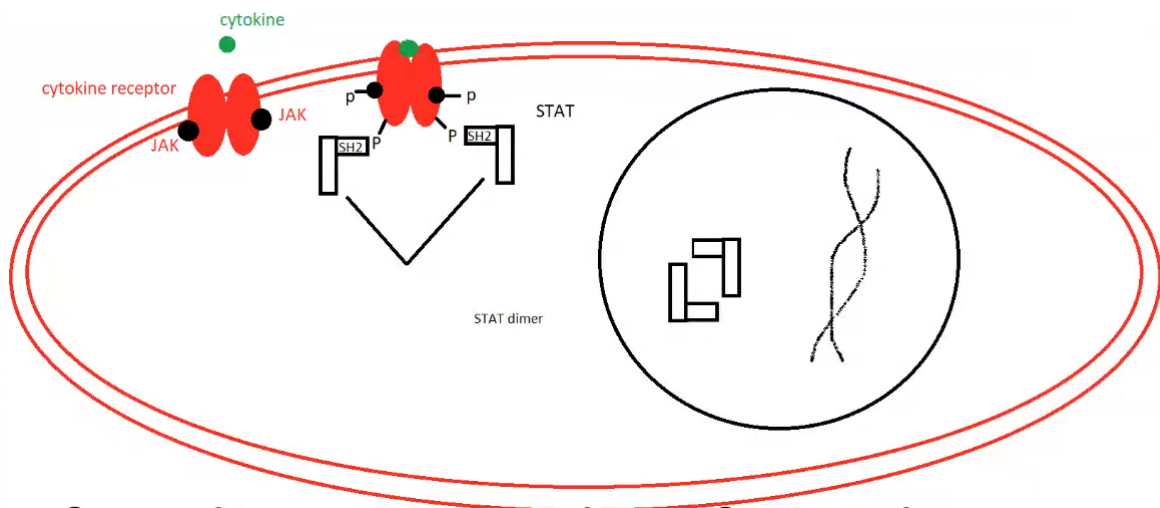


Lecture_3

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- **Central dogma of life** : DNA transcribes in RNA and RNA is converted into protein
- **JAK STAT pathway** :
 - JAK STAT pathway is an immunological response
 - It is for initiating central dogma
 - JAK and STAT are two different parts of this pathway
 - Plays a vital role in immunity, cell division and multiplication and cell death (apoptosis)
 - **Pathway (Own words)** :



- Cell has cytokine receptor (TKR type) present on it with a residue attached to it known as JAK (Janus Kinase)
- cytokine molecule binds to the receptor
- JAK gets phosphorylated due to the binding of cytokine to the receptor
- Leads to establishment of phosphate group on the receptor
- STAT molecule present in the cell along with SH2
- Due to phosphorylation the STAT molecule binds to the receptor
- Due to this binding STAT gets activated and leads to bond formation between two stat molecules called a stat dimer
- This dimer now moves into the nucleus and transcribes DNA
- **Pathway (Sir's explanation)** :
 - There is presence of cytokine receptor which is associated with JAK molecule
 - When the cytokine binds to receptor the JAK gets phosphorylated

- The activated JAK residues will phosphosrylate the tyrosine kinase receptor which helps in recruitment of 2 molecules of STAT
- The STAT molecule will then dissociate from receptor
- After dissociation they form a dimer
- The dimer then enters into the nucleus and leads to transcription of DNA

Paracrine, autocrine, endocrine gland meaning and example : note, diagram

Write a note on Adenohypophysis and neurohypophysis and pititutory gland, draw figure

- write about role
- hormone
- activating factor

Hypothalamus as a controller of all glands : short note, diagram



Thyroid gland : note, diagram

Adrenal gland : note, hormones, role

Digestive hormones : notes, type, functions

liver and pancreatic cells, hormones : note

note on diseases caused by release of excess hormone or deficieny

paracrine autocrine endocrine glands thyroid gland Draw the gland note of hormone released ADrenal gland structure not required	adenohypophysis neurohypophysis 	digestive hormone 	PG write a note on neurohypophysis adenohypophysis role, hormone activacting factor Hypothlamus : as a controller of all gland
<div style="border: 1px dashed black; padding: 5px; display: inline-block;">hormones form liver and PC</div>			