

**Regulation of gene expression SS – 3<sup>rd</sup> seminar**

**Prokaryotic cells:**

- basic terms – gene, operon, promotor, operator
- induction (Lac operon)
- repression (Trp operon)

**Eucaryotic cells:**

- differences between eukaryotic and prokaryotic cells
- regulation of gene expression on many levels:
  - transcription level
    - presence of transcription factors – basic and specific
  - posttranscriptional modification of primary transcript (preparation of mature mRNA)
    - 5' capping
    - 3' polyA tail
    - splicing and alternative splicing
    - stability and durability of mRNA
- translation

Useful YouTube videos on the topic:

<https://www.youtube.com/watch?v=TEQMeP9GG6M>

<https://www.youtube.com/watch?v=DYgpRosowcg>

<https://www.youtube.com/watch?v=4pSTNYqQvXM>

...and many others

**Next week:**

- digestion, digestion enzymes, production of HCl in stomach and its regulation

Lippincott's:

- Chapter 7, Part III: Digestion of dietary carbohydrates
- Chapter 15, Part II: Metabolism of dietary lipids
- Chapter 19, Part III: Digestion of dietary proteins