

Translation

Chapter 7B

- I. Sets of Three
 - A. Translation
 - B. Genetic code
 - 1. codon
 - C. Reading frames
- II. Transfer RNA
 - A. tRNAs
 - 1. quantity
 - 1) wobble
 - 2. structure
 - a. cloverleaf
 - b. anticodon
 - B. Aminoacyl-tRNA synthetases
 - 1. activated
 - 2. proofreading
 - C. Initiation tRNA
 - 1. AUG
 - 2. tRNA_i^{Met}
- III. Ribosomes
 - A. Structure
 - 1. rate
 - B. rRNAs
 - 1. svedberg
 - 2. Pro
 - 3. Euk
 - C. Initiation
 - 1. prokaryotic
 - a. Shine-Dalgarno
 - 2. eukaryotic
 - a. eIF2-GTP
 - b. eIF5
 - 1) 43S preinitiation complex
 - c. eIF4
 - d. eIF5B-GTP
 - D. Elongation
 - a. elongation factors
 - 1. entry of aminoacyl-tRNA
 - a. EF1 α -GTP
 - 2. GTP hydrolysis
 - 3. peptidyltransferase reaction
 - 4. translocation
 - a. EF2-GTP
 - E. Termination
 - a. stop codons
 - b. release factors
 - 1. eRF1
 - 2. eRF3-GTP
 - 3. ABCE1
 - F. Polysomes
 - G. Protein synthesis antibiotics

IV. Protein Degradation

A. Why degrade

B. How degrade

1. Lysosomes

2. Cytoplasmic

a. Ubiquitin

b. Proteasomes