# Recitation 3

Instructions: Do NOT load any packages to do this assignment.  If you are not familiar with the genetic code, you will want to do a little reading on wikipedia or work with a biologist.

1.  Write a custom function called **codon_to_aminoacid** that takes a character string called **codon** (three letters) as input and outputs a character string that is the single letter code for corresponding amino acid.

2.  Write a custom function called **translate_dna** that
    1.  takes a character string called **dna** as input,
    2.  checks if the string length is a multiple of 3 (if statement) (try using a remainder)
    3.  parses the string into three letter character strings (loop and substring)
    4.  passes the three letter character strings to codon_to_aminoacid function from (1)
    5.  pastes the resulting amino acids together into a polypeptide chain (trying using paste0)
    6.  prints an error message if the dna length is not a multiple of 3 (else)
    7.  outputs the polypeptide chain or an empty string

3.  Write a short script that contains the functions from (1) and (2) and passes the following DNA sequences into **translate_dna**:

a)  ATGCTTTTTGTGTCACCCGCCTATCACAACAAAGATGAATGTTGGCGGAGTAGGGGGTAG
b)  ATGGGAAGACGACGCTGGTGCGAATTAA