Biology I

**Transcription and Translation Lab—attach in lab notebook**

1. Transcribe the DNA from the 3' to 5' direction, the resulting mRNA transcript reads 5' to 3'.

2. Find the START codon (AUG) and finish translation when a STOP codon is reached. Ribosomes read mRNA starting at the 5' end and ending at the 3' end. Note: in our lab, only two codons will be STOP codons: UAA and UAG. The codon UGA will stand for the amino acid selenocysteine.

3. Your polypeptide will be made of single capital letters that stand for the amino acids. For example, if you follow the provided key, A stands for Alanine, and H stands for Histidine, etc. Therefore, you should only record a single capital letter for each amino acid in the polypeptide.

You need three translations for an A, two translations for a B, and one for a C.

3'GGCTAATAACCCTTACTGCGTACTTGATACTTTACGCGCCGAGCGATTGCTGTATTTACCCAGGACCCTTGCACTCAAGCGATTCCTTCTGATCGG 5'

3'GGGCCAAAAATAAACCCCGGGGGTTTTTAAAACCTTTTACCTTGAGCAGTATAGGGATTAGCAAACTAGAATTGGGGGAAAAAACCCCGCGCGC 5'

3'AACACACCCGGTTCTTTTTCCACGGGGATACTGCGTACTCACATATCGAACGGCACTTCGCTGCCTTCTGCGATATCTGAGGATTGGGCCACACG 5'

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3'CGGCGTAAAATTTTCCCAGAGCTACCAGCGAACGACATATTTGCTTAGGACACGAACTAGGCTCCGAACTTGTTAAAGATACATTCCGCCCGGGAA 5'

3'TACTGGCTTCTCTTGCGGCCCCTCGCCAGTTGGGTGTAATTGTTTTGGGTGCTTTTACGGACATGCACGCGAGCTCTTAAAACTGAAGACATAATT 5'

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