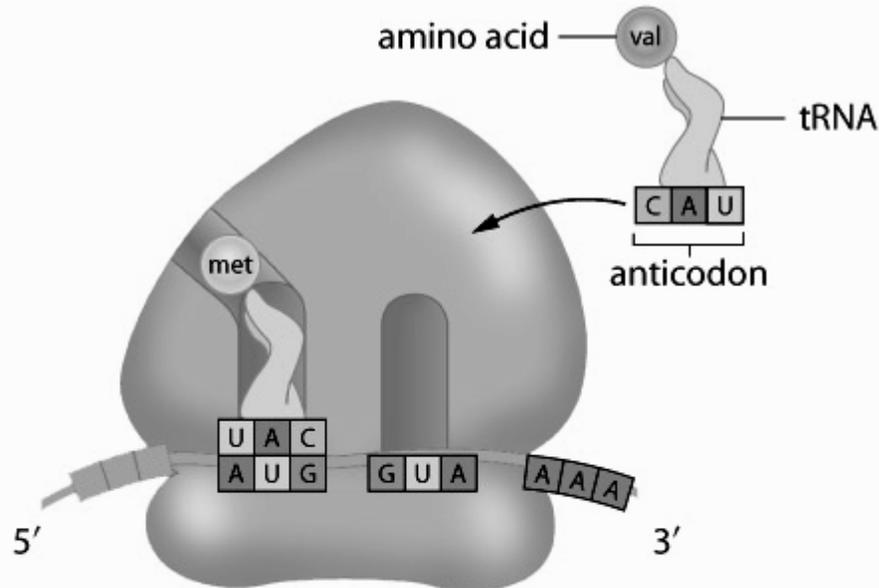
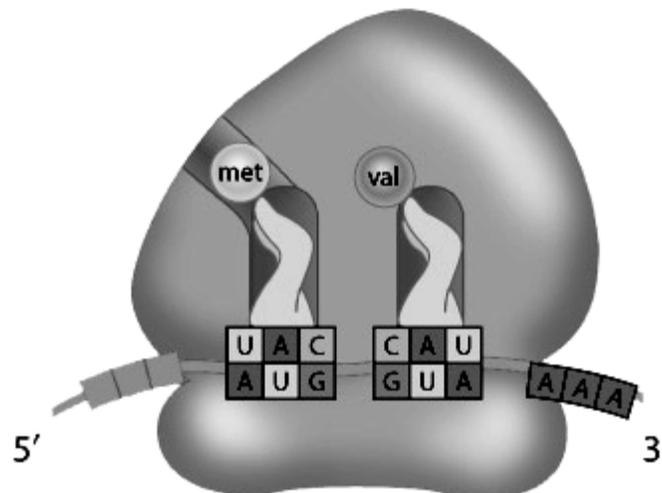


The translation cycle involves the base pairing of a new tRNA, the transfer of a growing polypeptide chain, and the movement of the ribosome along the mRNA molecule. The complete cycle occurs about 15 times per second in a prokaryotic cell.



- A** When translation is initiated, a single tRNA molecule carrying the amino acid methionine sits on the first exposed codon, the start codon AUG. A second tRNA, carrying a second amino acid, approaches the adjacent codon.



- B** The anticodon of the second tRNA pairs with the mRNA codon at a site next to the first tRNA.