



**Figure 4.7.** Translation of genetic information from a nucleotide sequence to an amino acid sequence. (With permission, from M. W. Jensen and D. N. Wright, *Introduction to Medical Microbiology*, Pearson Education, Upper Saddle River, NJ, 1985, p. 66.)

cell properly folds a protein, additional cellular processing steps must occur to make a useful product.

Many proteins are secreted through a membrane. In many cases, the translocation of the protein across the membrane is done *cotranslationally* (during translation), while in some cases *posttranslation* movement across the membrane occurs. When proteins move across a membrane, they have a *signal sequence* (about 20 to 25 amino acids). This signal