

Quiz #3

Diagrams are on a separate page.

1. Figures 1A-1C show several views of the same small peptide.
 - (a) How many amino acids are in this peptide? _____
 - (b) There is a structural feature that creates a ring; it is particularly visible in Figure 1B. What is it? Circle it and name it. Note we are not talking about the aromatic ring.
 - (c) What is the sequence of this peptide? _____
2. Figures 2A-2D show various views and presentation styles of a small protein. The entire structure is shown in Figure 2A.
 - (a) How many α -helices are present? _____
 - (b) How many β -strands are present? _____
 - (c) On Figure 2A circle the N-terminus.
 - (d) On Figure 2A carefully mark a region of an anti-parallel β -sheet.
 - (e) On Figure 2A carefully mark a region of a parallel β -sheet.
 - (f) Figure 2B shows the region of the molecule where one side of the the large β -sheet is packed against one surface of the α -helix. Most of this region is dominated by one amino acid. What is it? _____
 - (g) Still thinking about Figure 2B, does it make sense that the amino acid you identified would be found here? Explain.
- (h) Looking at Figure 2C, is this an α -helix or β -sheet? Circle your answer.
 - (i) Still looking at Figure 2C, clearly draw in four hydrogen bonds as dotted lines or dots.
 - (j) Still looking at Figure 2C, mark the N-terminus.
- (k) Looking at Figure 2D, is this an α -helix or β -sheet? Circle your answer.
 - (l) Still looking at Figure 2D, clearly draw in four hydrogen bonds as dotted lines or dots.
- (m) Still looking at Figure 2D, mark the N-terminus of the top strand.
- (n) Still looking at Figure 2D, mark the N-terminus of the middle strand.
- (o) Still looking at Figure 2D, mark the N-terminus of the bottom strand.

Figure 1A

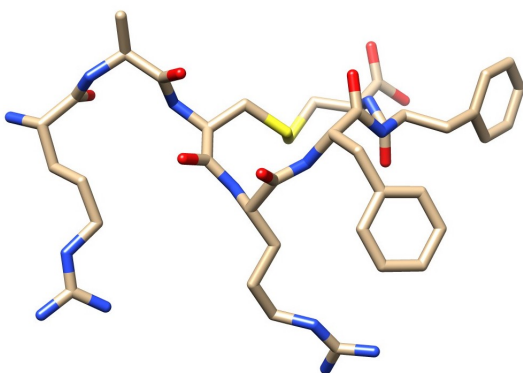


Figure 1B

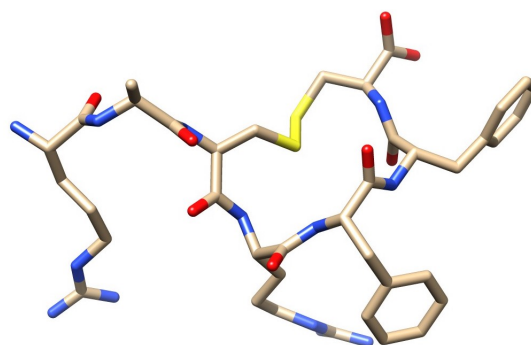


Figure 1C

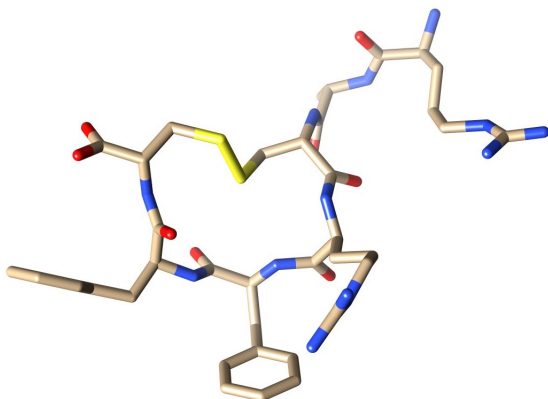


Figure 2A

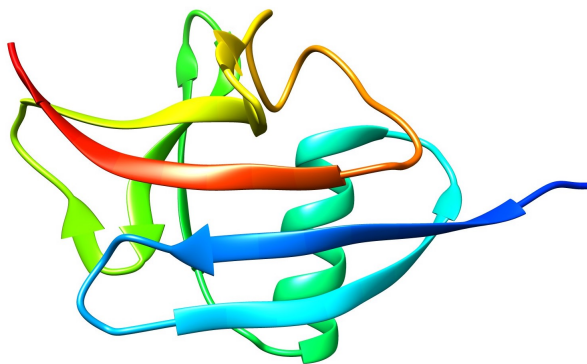


Figure 2B

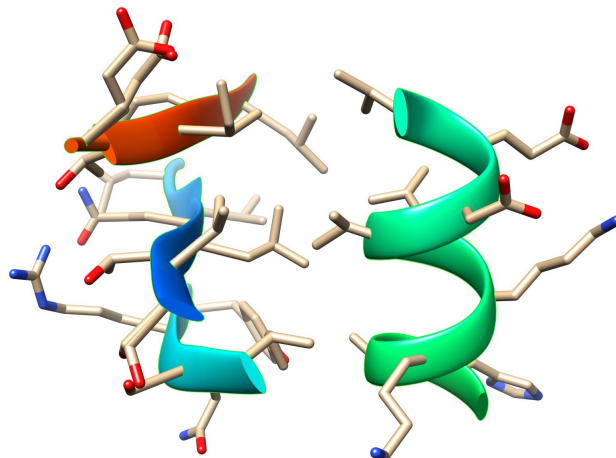


Figure 2C

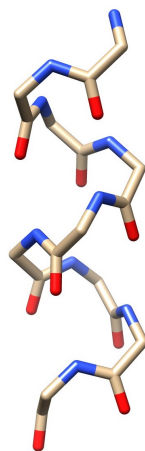


Figure 2D

