

Quiz #3

Diagrams are on a separate page.

- Figures 1A-1C show several views of the same small peptide.
 - How many amino acids are in this peptide? 7 see notes on Figure 1
 - 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.
 - What is the sequence of this peptide? arg-ala-cys-arg-phe-phe-gs
- Figures 2A-2D show various views and presentation styles of a small protein. The entire structure is shown in Figure 2A.
 - How many α -helices are present? 1
 - How many β -strands are present? 6 β -strands numbered on Fig 2A
 - On Figure 2A circle the N-terminus. ✓
 - On Figure 2A carefully mark a region of an anti-parallel β -sheet. ✓
 - On Figure 2A carefully mark a region of a parallel β -sheet. ✓
 - 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? Val
 - Still thinking about Figure 2B, does it make sense that the amino acid you identified would be found here? Explain.
Yes, we expect non-polar residues to fold inside due to hydrophobic forces
 - Looking at Figure 2C, is this an α -helix or β -sheet? Circle your answer.
 - Still looking at Figure 2C, clearly draw in four hydrogen bonds as dotted lines or dots. ✓
 - Still looking at Figure 2C, mark the N-terminus. ✓
 - Looking at Figure 2D, is this an α -helix or β -sheet? Circle your answer.
 - Still looking at Figure 2D, clearly draw in four hydrogen bonds as dotted lines or dots. ✓
 - Still looking at Figure 2D, mark the N-terminus of the top strand. ✓
 - Still looking at Figure 2D, mark the N-terminus of the middle strand. ✓
 - Still looking at Figure 2D, mark the N-terminus of the bottom strand. ✓

