

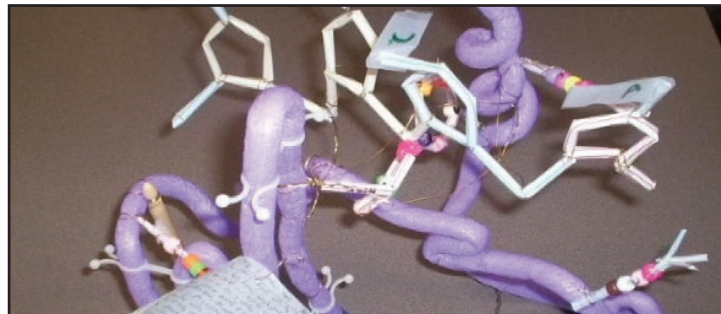
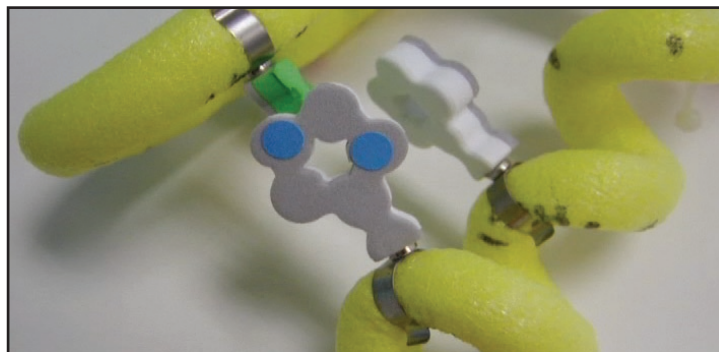
Going Beyond Just a Backbone Model








For the pre-build portion of the competition, teams are expected to design a model of a specific protein before the day of the event. This model will be brought to the event and impounded for judging the morning of the competition. One of the main differences between this pre-build model and the on-site model will be the creative additions. Teams are encouraged to take the pre-build model even further by adding meaningful and accurate additions to the materials provided.

For example, the protein being modeled may have a few sidechains that are important to its structure or function. These can be accurately shown in the protein model. Or the protein may bind to other important molecules like DNA. Including representations of these other molecules could help tell the story of how this protein works.

Materials for these creative additions will not be provided. Teams will have to decide on their own what materials would best represent what they would like to show. Some suggested materials that have been used successfully in the past are clay, pipe cleaners, and foam cut-outs.

It is important to keep in mind that the creative additions have to be accurate and show an important feature of the protein. For example, simply showing every sidechain on the protein does not necessarily help explain the protein's function. However, including a few of the important sidechains and explaining why they are important would. All pre-build models should also be submitted with a note card. This card should help explain the creative additions - possibly by telling what colors are used, what they represent, and why these additions are important.



School Name	Team #
 - DNA	
 - Alpha Helices	
 - Beta pleated sheets	
 - His 25	 - Cys 7
 - His 29	 - Cys 12
The two <u>histidine</u> and two <u>cysteine</u>	