Model Description Sheet

When you submit a model design to be constructed on the 3D printer, we also need you to submit a model description. This description will be used to generate a model description sheet to go with the model. We will include your abstract and a photo of the model with the model description. The model description sheet will allow any observer to understand more about the protein you modeled and why you designed it the way you did.

Authors. The authors are the students who are performing the research and model design. The educator and research mentor will be listed separately. Names may be listed in order of level of contribution with the person doing most of the work on the project listed first, or the names may be listed alphabetically.

Educator(s). List the name(s) of educator(s) with whom the team worked.

Institution. Name of institution, address, city, state, zip code

Reseach Mentor(s). List the name of your mentor, title, research institution, city, state, zip code

Protein Being Studied. Please include the full name of the protein being studied. You may also include the acronym or nickname of the protein, if one is commonly used.

PDB file. Include the name of the pdb file you used to design your model. This name will be printed on the side of your model as well as on the model description sheet. If you (or your mentor) made any changes to an existing pdb file, or used an unpublished (ie not found in the Protein Data Bank) pdb file, that needs to be indicated.

Primary Citation. Each pdb file in the Protein Data bank has a primary citation associated with it. Please include this reference, as it is the primary paper that describes the structure of the protein you modeled.

Abstract: Include an abstract (200-250 words) that includes a "why should I care?" big picture overview of the importance of the protein, followed by additional information about the protein's structure/function. This information should correlate with the molecular story you are showing in the model. Guidelines for writing an abstract can be found here: (http://cbm.msoe.edu/images/contentImages/crest/pdf/abstract.pdf).

Additional References. Most likely, your model design was informed by data from additional research papers….but you also probably read many more papers to gain the background to understand your protein. You should only list those papers that contributed directly to your model design – and possibly one review article that would provide background information for someone who might want to pick up where you left off with this protein.

Model Description. You need to provide a key to your model that describes the features you are displaying and how you are displaying them. This can be written as a series of bulleted statements, but should address:

        a. Color scheme
        b. Sidechains displayed (list specific residues here)

c. Include any other parts of model (substrate, inhibitor, another protein, heme group, metal ion, etc.)