

Development and Evaluation of Amino Acid Molecular Models  
*Aparecido R. Silva<sup>1</sup>, Leila M. Beltramini<sup>1</sup>*

<sup>1</sup>Departamento de Física e Informática, Instituto de Física de São Carlos,  
Universidade de São Paulo, SP- Brasil

The comprehension of structure and function of proteins has a tight relationship with the development of structural biology. However, biochemistry students usually find difficulty to visualize the structures when they use only schematic drawings of didactic books. The representation of three-dimensional structures of some biomolecules with ludic models, built with representative units, have supplied to the students and teachers a successfully experience to better visualize and correlate the structures to the real molecules. The present work shows the developed models and the process to produce the representative units of the main amino acids in industrial scale. The design and applicability of the representative units were discussed with many teachers and some suggestions were implemented to the models. The preliminary evaluation and perspective of utilization by researchers show that the work is in the right direction. At the actual stage, the models are defined, prototypes were made and will be presented in this meeting. The moulds for the units are at the final stage of construction and trial in specialized tool facilities. The last term will consist of an effective evaluation of the didactic tool for the teaching/learning process in Structural Molecular Biology. The evaluation protocol is being elaborated containing simple and objective questions, similar to those used in research on science teaching.

Acknowledgements: Fapesp

Keywords: Amino acids, Didactic, Structure