Interactive Biochemistry Classroom

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**Abstract**

Visualization is the heart of human cognition. Visualization of biomolecules has proven to be an essential part in the biochemical approach for medicinal therapy. The need and benefits of visualizing biomolecules is discussed. We present a manner of presenting an introduction to biochemistry via the visualization of macromolecules. The interactive visualization developed, using JavaScript libraries allows users to drag, pan, zoom in on particular parts of figures in order to properly visualize it, just to name a few characteristics. With the web interface, there also includes an animation of the in vivo molecular interactions, such as the process of protein folding or the interaction of oxygen with hemoglobin. Research in visualizing macromolecules has long been done with staining via tissue samples or fluorescent. This technique of taking all previously identified macromolecules and presenting them in a single, interactive visualization for the sake of ease and furthering the apprehension of the molecular structure-function. As a more recent concept, this program will prove helpful for students learning biochemistry and related fields such as physiology alongside researchers trying to visualize biomolecules.