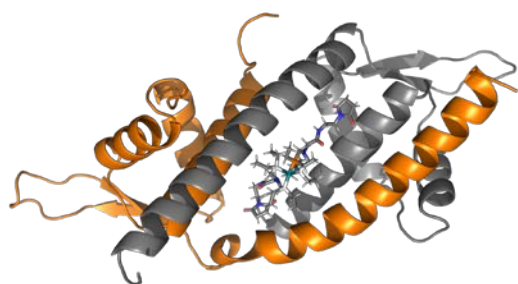


Tiny But Mighty: Exploring Enzymes



STEM Ambassador(s):

Joe Laureanti
Joseph.Laureanti@pnnl.gov



What are proteins and enzymes and why are they important?

What are the challenges associated with studying enzymes?

What can we learn from enzymes by exploring them using virtual reality?

Scientists at PNNL are using virtual reality to explore complex systems to understand how they behave on a molecular level. For example, enzymes are proteins that convert molecules to either smaller or bigger ones, and they waste almost no energy when doing so. However, enzymes are incredibly small and being able to see them is not an easy task. Having the ability to visualize these systems and manipulate them in a three-dimensional world allows scientists to better understand natural systems and improve man-made processes on an industrial scale.



By using virtual reality tools to explore natural systems that are too small to see with the naked eye, we will be able to produce chemicals with little wasted energy, which in turn, would lower the cost of lighting our homes, fertilizing our crops, and fueling our transportation systems.



For more information, visit:
www.pnnl.gov/stem



or email:
stem.education@pnnl.gov