

Biomolecules such as proteins interact with one another to ensure our cells' good health and functioning, and as such, the 3D atomic structure of these interactions is an important target of biological and pharmaceutical research. The recent developments in virtual reality (VR) technology set the stage for a new generation of molecular visualization and analysis tools. Consequently, our international team of researchers proposes to use VR to bring an intuitive and immersive user interface to very powerful computational chemistry algorithms. We intend to put molecular structures in the hands of expert scientists - literally - and let them make use of their chemical and biological intuition to study the fundamental building blocks of life. We expect this unprecedented level of interactivity to stimulate the creativity and productivity of structural biologists, as well as create a new field of research at the interface of computer vision, virtual reality, and structural biology.