People in the field of structural biology are constantly replacing, analyzing, and verifying laboratory tools in order to analyze experiment results every day. This definitely takes a considerate amount of time to do the final modeling.

Globally, there is programming that recognizes the sequence of protein data directly from the PDB center, also known as the protein data bank. PDB is a [database](https://en.wikipedia.org/wiki/Database) for the three-dimensional structural data of large biological molecule. And this database can be visualized through molecular visual systems such as pymol, where 3D modeling is possible by computer.

Structural biology is a branch of [molecular biology](https://en.wikipedia.org/wiki/Molecular_biology), [biochemistry](https://en.wikipedia.org/wiki/Biochemistry), and [biophysics](https://en.wikipedia.org/wiki/Biophysics) concerned with the molecular structure of biological [macromolecules](https://en.wikipedia.org/wiki/Macromolecule), how they acquire the structures they have, and how alterations in their structures affect their function.[[](https://en.wikipedia.org/wiki/Structural_biology#cite_note-1)

This subject is of great interest to biologists because macromolecules carry out most of the functions of cells, and it is only by coiling into specific three-dimensional shapes that they are able to perform these functions.

approach that structural biologists take to understanding structure is bioinformatics to look for patterns among the diverse sequences that give rise to particular shapes. Researchers often can deduce aspects of the structure of integral proteins manually.

However, by connecting the microscope to the previously mentioned software, manual work will significantly decrease since the prediction work can be automatically done according to the molecule database saved within in it. Observation of changed protein models, measurement of modification of each virus and bacteria, which is most important based on AI technology have been introduced and utilized in the structural biology field recently. We can

Even without human beings, the AI-electronic microscope will store, analyze and predict the data on its own and keep the information available to the researchers. Introducing this AI microscope will lead a paradigm shift in the field of bioinformatics.