

*The first protein crystallography project in Jordan*

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X-ray crystallography is an important method for determining the 3D structures of biological molecules. Since its discovery, this method has become a major tool for drug discovery. Although X-ray protein crystallography is an extremely powerful tool, there are a few obstacles blocking its path to prominence. One of biggest challenges is that X-ray crystallography is expensive. This presents a major obstacle to labs in the developing countries that have no access to funding.

As the case in most developing counties, scientific research funding is not a priority in Jordan due to limited resources and escalating development challenges. In 2014, I took the initiative of starting protein crystallography research in Jordan [1]. A structure-based drug discovery project tackling one of the major public health challenges in the country and worldwide, obesity, has been implemented. Obesity is a major risk factor for numerous health problems, including cardiovascular diseases, cancer and diabetes.

The project aims at the determination of the 3D structure of carbonic anhydrase III (CAIII) in complex with small ligands as a tool to guide new synthetic approaches and help identify novel enzyme inhibitors. CAIII is a novel target for obesity treatment.

This is the first protein X-ray crystallography research project to be carried out in Jordan.

[1] Abuhammad, A. (2015). Crystallography for the next generation: the legacy of IYCr. Rabat: IUCr.

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