

ISRAEL

Ada E. Yonath

Crystallography (chemistry)

Ada Yonath received the Nobel Prize in Chemistry in 2009 for her studies and the application of the crystallography technique to determine the structure and function of ribosomes. Ribosomes are organelles found in the cytoplasm of living cells, and are macromolecules composed mainly of proteins and ribonucleic acid (RNA). They are like tiny machines that build all the proteins a cell needs to live, from haemoglobin to insulin. Ada Yonath created the first ribosome crystals in history.

She also used crystallography to study the mode of action of antibiotics within the ribosome, and the way in which bacteria become resistant to them. This technique is used to create more effective antibiotics, and Yonath has examined more than twenty different antibiotics, exploring avenues for discovering new antibiotics, and creating more effective ways of healing certain diseases

She is currently director of the Helen and Milton A. Kimmelman Center for Biomolecular Structure and Assembly of the Weizmann Institute.