香港城市大學
City University of Hong Kong

City University Distinguished Lecture Series

Speaker

Professor Ada Yonath

Director, Kimmelman Center for Biomolecular Structure and Assembly
Weizmann Institute of Science
Nobel Laureate in Chemistry (2009)

From Basic Science to Advanced Medicine

on

Tuesday, 21 April 2015 at 3:00 pm
at
Connie Fan Multi-media Conference Room
4/F Cheng Yick-chi Building
City University of Hong Kong
Tat Chee Avenue, Kowloon

Abstract

Ribosomes are the universal cellular multi-subunits molecular machines that translate the genetic code into proteins. Their mode of action and principles of their evolution have been deciphered from the three dimensional structures of bacterial and eukaryotic ribosome. Owing to the ribosome's key role in life they are targeted by many antibiotics that paralyze them by binding to their functional sites. Detailed antibiotics binding modes, inhibitory actions and synergism pathways have been determined for almost all ribosomal antibiotics. These indicated the principles of differentiation between patients and pathogens, suggested mechanisms leading to bacterial resistance and paved ways for improvement of existing antibiotics as well as for the design of advanced therapeutics capable of distinction between pathogenic bacteria and the natural microbiome as well as minimizing antibiotics resistance.

Biography

Professor Ada Yonath received her Bachelor and Master degrees from the Hebrew University, earned her Ph.D. from Weizmann Institute and post-doctoral degree at Mellon Institute and MIT, USA. In the seventies she established the first laboratory for protein crystallography in Israel, which was the only one of this kind in the country for almost a decade.

Currently she is the Director of Kimmelman Center for Biomolecular Structures at the Weizmann Institute. During 1977-1978 she was a visiting scientist in Chicago University and during 1986-2004 she headed a Max-Planck-Research-Unit in Hamburg, Germany.

Among others, she is a member of the US National Academy of Sciences (NAS); the American Academy of Arts and Sciences; the Israel Academy of Sciences and Humanities; the German Science Academy (Leopoldina); the Pontificia Accademia delle Scienze (Vatican); the European Academy of Sciences and Art; the Korean Academy for Science and Technology; the European Molecular Biology Organization (EMBO); the Microbiology Academy; the International Academy of Astronautics and the UK Royal Society for Chemistry.

She holds honorary doctorates from several universities, including Oslo, NYU, Mount Sinai, Oxford, Cambridge, Hamburg, Berlin-Technical, Patras-Greece, De La Salle University-Manila; Xiamen University-China and most Israeli Universities. Her awards include the Israel Prize; Paul-Karrer Medal; Louisa-Gross-Horwitz Prize; Ehrlich-Ludwig Medal; Linus Pauling Gold Medal; Anfinsen Prize; Wolf Prize; UNESCO/L'Oreal Award; Albert-Einstein World Award for Excellence; DESY pin; KEK distinction; Erice Peace Prize; Florence Cite Medal; Hong Kong Baptist University Indian PM Gold medal; Maria Sklodowska-Curie Medal; The Nobel Prize for Chemistry.

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