

First Winner



Project Title:

Structure and Function of Chromatin
in Eukaryotes

Researcher:

Professor Roumen Tsanev

Country:

Bulgaria

University:

Sofia University

Professor Roumen Tsanev, the most famous Bulgarian molecular biologist, has laid the foundations of the molecular biology in Bulgaria more than forty years ago. He is the founder of the Institute of Molecular Biology at the Bulgarian Academy of Sciences and also one of the pioneers in both discovering the nucleosome binary structure and behavior of nucleosomes during transcription and translation and developing the methods for separation of nucleic acids by gel electrophoresis. He is the author of the Epigenetic Code Hypothesis, and also published more than 200 scientific papers in the journals and co-author of 17 books and several patents.

The main scientific results of his research are binary and asymmetric structure of nucleosomes; distribution and localization of histone variant H1; presence of stable evolutionary conservative non-histone proteins firmly bound to DNA; behavior of nucleosomes during transcription and replication; protamine - histone replacement after fecundation; presence of nuclear matrix in spermatozooids; structure of RNP poly-particles; role of RNA degradation in leukotaxis and phagocytosis after tissue injury; nuclear matrix and transcription; mathematical modeling of genetic networks; role of non-linearity; two types of cellular reprogramming; two-wave length of nucleic acids estimation in tissues, and separation of RNA species by gel electrophoresis.