I begin by addressing the time dimension: Why was biology so late developing as a science? The ancients had their explanations for why rocks are immobile while rabbits dash about. Aristotle devised a hierarchical classification of living creatures with 11 levels, but biology remained largely a descriptive science, even after Darwin. In 1944 Schrödinger asked "What Is Life?" While many of his ideas were incorrect, they were inspirational and some adventurous physicists took up biology. With Watson and Crick genes left their existence as an abstraction and became written in DNA. An answer to my question of why biology was late in development is that we needed chemistry and physics as well as computer science and biotechnology. The biology revolution could not have happened much earlier than it did, and we are just getting started.

We three awardees of the 2015 Dan David Future Prize caught the transformation of biology from mostly a descriptive subject to an information science. Our research was not then in any hot-topics category; we simply found fascinating problems that were irresistible and we were determined to pursue them. We greatly appreciate the Dan David Foundation for choosing this area for the award and we are deeply honored to be the awardees.