

Preface

An mRNA vaccine is a type of vaccine that uses a copy of a molecule called messenger RNA (mRNA) to produce an immune response. The vaccine delivers molecules of antigen-encoding mRNA into cells, which use the designed mRNA as a blueprint to build foreign protein that would normally be produced by a pathogen (such as a virus) or by a cancer cell. These protein molecules stimulate an adaptive immune response that teaches the body to identify and destroy the corresponding pathogen or cancer cells. The mRNA is delivered by a co-formulation of the RNA encapsulated in lipid nanoparticles that protect the RNA strands and help their absorption into the cells.¹

In the present book, eleven typical literatures about mRNA vaccines published on international authoritative journals were selected to introduce the worldwide newest progress, which contains reviews or original researches on mRNA vaccines. We hope this book can demonstrate advances in mRNA vaccines as well as give references to the researchers, students and other related people.

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¹ https://en.wikipedia.org/wiki/MRNA_vaccine