



mRNA Vaccines & Therapeutics 2017: an industry analysis of technologies, pipelines, stakeholders and deals

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Report Description

mRNA Vaccines & Therapeutics 2017: an industry analysis of technologies, pipelines, stakeholders and deals

For a long time, messenger RNA (mRNA) was thought to be a poor choice for a therapeutic agent given its relatively short half-life and its immunogenicity. But mRNA is rather versatile and offers a range of advantages. mRNA lacks genomic integration and its use results in transient expression of the encoded protein. This favorable safety profile makes mRNA especially attractive for vaccines and gene editing. mRNA is well defined chemically which ensures reproducible manufacturing at high yield, purity and activity. Improvements of lipid nanoparticle formulations as a vehicle for in vivo systemic delivery of mRNA has greatly favored the development of in vivo transfection strategies.

Range of clinical mRNA applications

- Cancer Vaccines
- Infectious Disease Vaccines
- In vivo Therapeutics

Gene Editing

- Standardized preselected
- Individualized

shared antigens

- Individualized neoantigens
- Prophylactic vaccines

- Therapeutic vaccines
- Synthetic self-amplifying mRNA vaccines for pandemic outbreaks
- Therapeutic proteins
- Therapeutic antibodies
- Ex vivo gene editing of gene defects
- In vivo gene editing of gene defects
- Ex vivo gene editing of autologous and allogeneic T-cells

mRNA Technologies have attracted more than US\$ 3.4 bln in equity financing and frontloaded partnership payments. Further billions of US\$ have been committed to mRNA R&D funding and potential milestone payments. A select group of major pharmaceutical and rare disease specialist biopharmaceutical companies have partnered with mRNA technology companies. At least 16 mRNA vaccines and therapeutics are in clinical stages and a considerable number is in IND or pre-IND stage.

This report „mRNA Vaccines & Therapeutics 2017: an industry analysis of technologies, pipelines, stakeholders and deals“ as of June 2017 brings you up-to-date regarding key mRNA players, key mRNA technologies and applications, mRNA vaccines & therapeutics, business projects, business deals and funding opportunities. The report analyzes the mRNA vaccine and therapeutic pipelines and stakeholders in the field, especially technology companies and rare disease biopharma and major pharmaceutical companies. The report highlights the value of mRNA vaccines and therapeutics in terms of partnering economic condition and equity financing rounds.

What will you find in the report?

- Profiles of standardized therapeutic cancer mRNA vaccines
- Profiles of individualized therapeutic cancer mRNA vaccines
- Profiles of therapeutic infectious disease mRNA vaccines
- Profiles of prophylactic infectious disease mRNA vaccines
- Profiles of mRNA protein therapeutics for immuno-oncology
- Profiles mRNA gene editing products
- Profiles of mRNA protein therapeutics for monogenetic rare diseases
- Pipelines of cancer and infectious disease mRNA vaccines
- Pipelines of mRNA Therapeutics for OTC deficiency and cystic fibrosis
- mRNA antibody therapeutics
- Therapeutic mRNA gene editing

- Ex vivo mRNA T-cell engineering
- Profiles of mRNA and delivery technologies
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