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We Know Technology, We Know Patents



INTRODUCTION

Scope of the report

- This report provides a detailed picture of the patent landscape for saRNA vaccines.
- This report covers patents published worldwide up to December 2022.
- We have selected and analyzed about +390 patent families relevant to the scope of this report.



Included in the report

- ✓ SaRNA vaccine constructs, compositions & manufacturing methods
- ✓ SaRNA dedicated carriers
- ✓ SaRNA vaccines for cancer treatment
- ✓ SaRNA vaccines for infectious diseases (SARS-Cov2, influenza etc.)
- ✓ SaRNA for veterinary applications

Not included in the report

- X Conventional mRNA vaccines
- X Circular mRNAs
- X Patent applications not clearly focused on SaRNA technology
- X Patent applications focused on other applications than SaRNA vaccines (e.g., therapeutic proteins)



INTRODUCTION

Key features of the report

- **Excel database** comprising all analyzed patents of the report is provided.
- This **patent database** allows multi-criteria searches, including:
 - Patent publication number
 - Hyperlinks to the original documents
 - Priority date
 - Title
 - Abstract
 - Patent assignees
 - Technical segmentation

advice of a national Patent Attorney.

- Legal status for each member of the patent family.





constitute or imply endorsement by a decision-making body such as a court of law or a patent office. Any assessment of

the effect or scope of pending applications or granted patents reflects our own views and these are not necessarily those

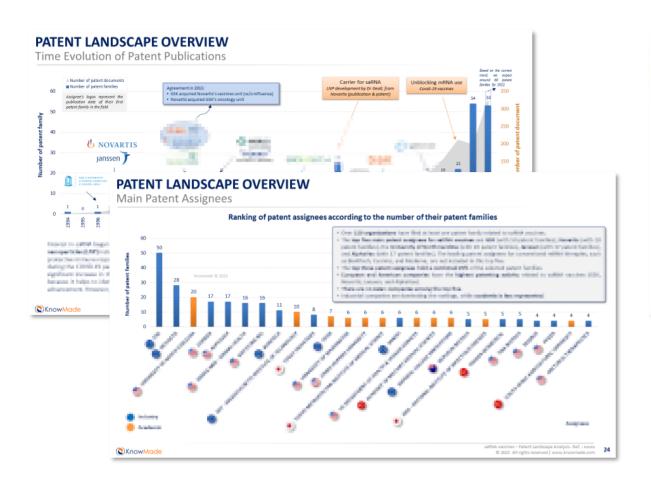
of a Patent Attorney. Should confirmation of our assessment in this respect be required, we recommend that you seek the

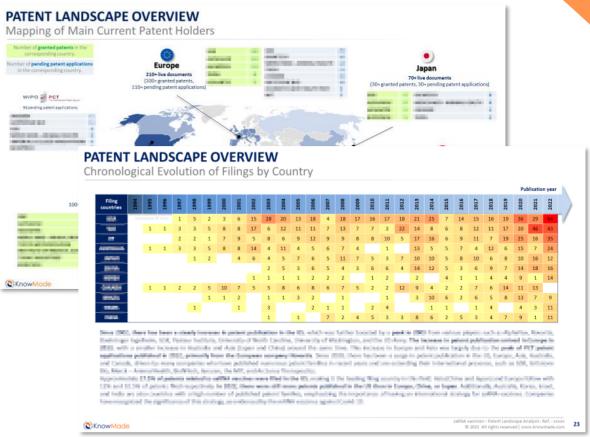


Patent Landscape Overview

Patent assignees, IP dynamics, patent legal status, patent geographical coverage









Patent Landscape Overview

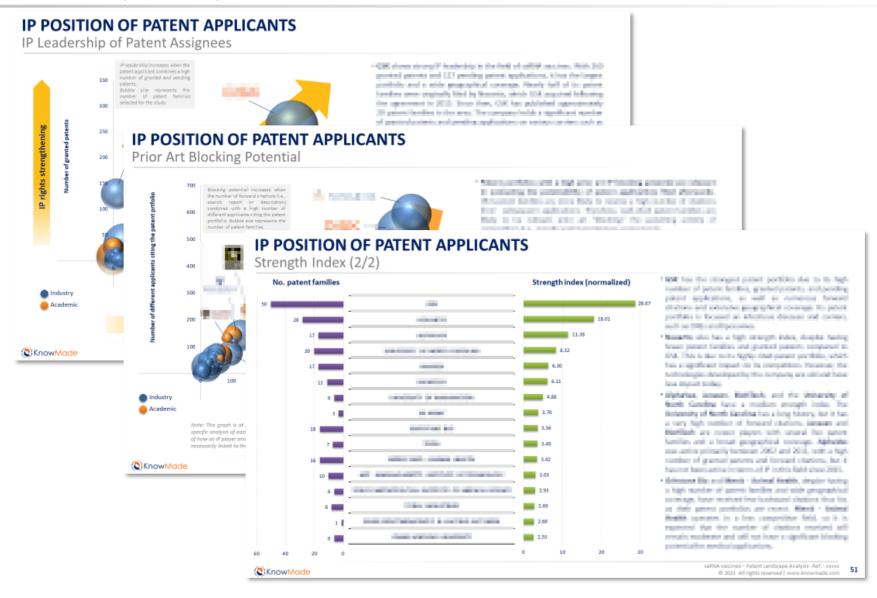
Identify main EP oppositions, collaborations and newcomers





Patent Portfolios Benchmarking: Beyond the Quantity

Who has the best patent portfolio?





Patent Portfolios Benchmarking: Beyond the Quantity

Who owns key patents?



GRANTED US & EP PATENTS WITH BROAD CLAIMS

Patent selection & main players (1/2)

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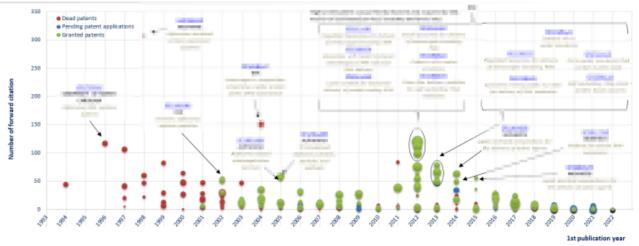
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Current assignees	Publication numbers	Grant date	Expected expiry dates	Main concept claim
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IP POSITION OF PATENT APPLICANTS

Patent Citation Analysis



This graph shows the main cited patent families according to their year of publication. Each sphere represents a patent family, and the diameter reflects the number of countries where family members have been published.

Granted: At least one family member is a granted patent (in the foreground of the graph)

Pending: At least one family member is a pending patent application (still under examination), and no family member is a granted patent

Dead: All family members are lapsed/revoked/expired patents



saRNA vaccines - Patent Landscape Analysis - Ref. : KM23002 © 2023 All rights reserved | www.knowmade.com



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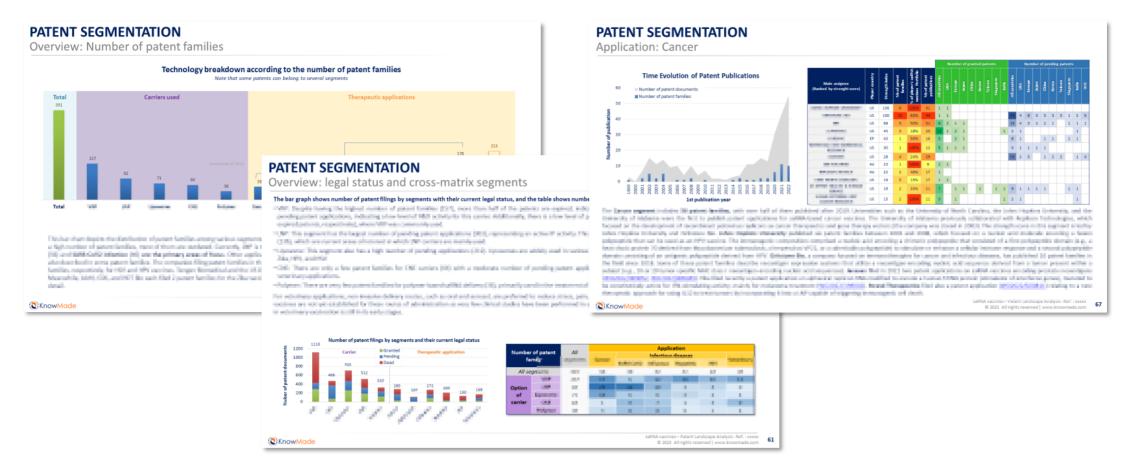
Patent Segmentation

What are the key IP players for each segments?

The patent families selected for this IP study were categorized based on their therapeutic applications and carriers used. The therapeutic applications were classified based on the main object of the invention. For carriers, the segmentation was carried out based on the examples described in these patent families.

Patent families were segmented into the following categories:

- **1. Applications**: cancer, SARS CoV2, influenza, hepatitis, HIV, veterinary;
- 2. Carriers: VRP, LNP, liposome, CNE, polymer;





IP profile of key players

IP portfolio summary, IP strategy, key patents and clinical trials

A focus on the 7 main players is provided in a dedicated section. For each player, the saRNA vaccines patent portfolio is statistically analyzed to provide an overview strengths and level of IP activity. The key patents of the player is then reviewed with its clinical trials.

IP profile



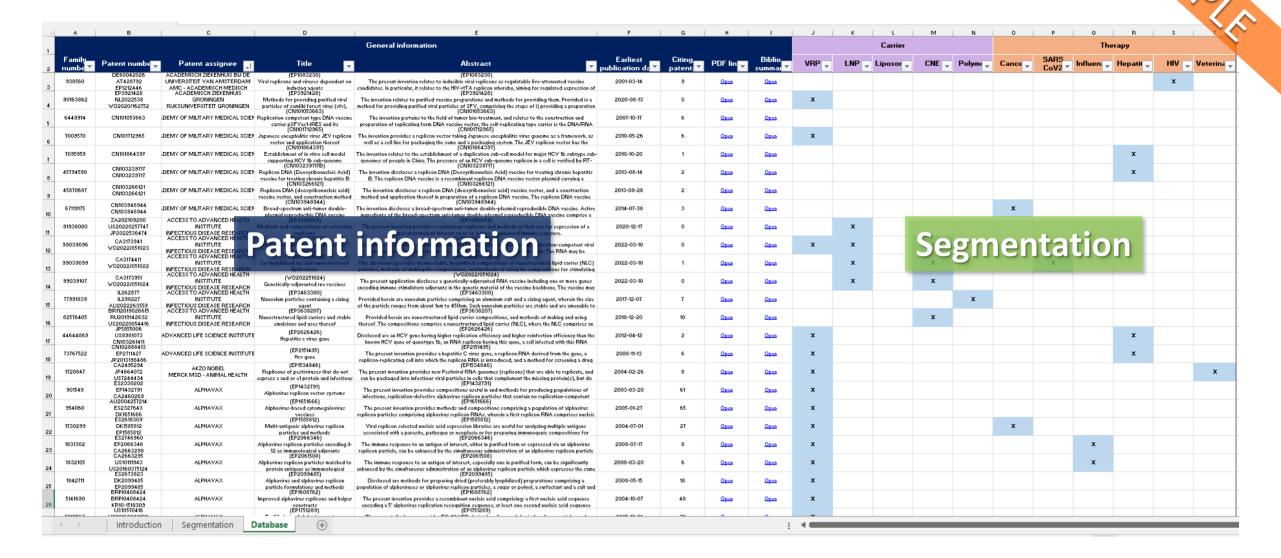
Animal Health





Excel file with all patents analyzed in the report

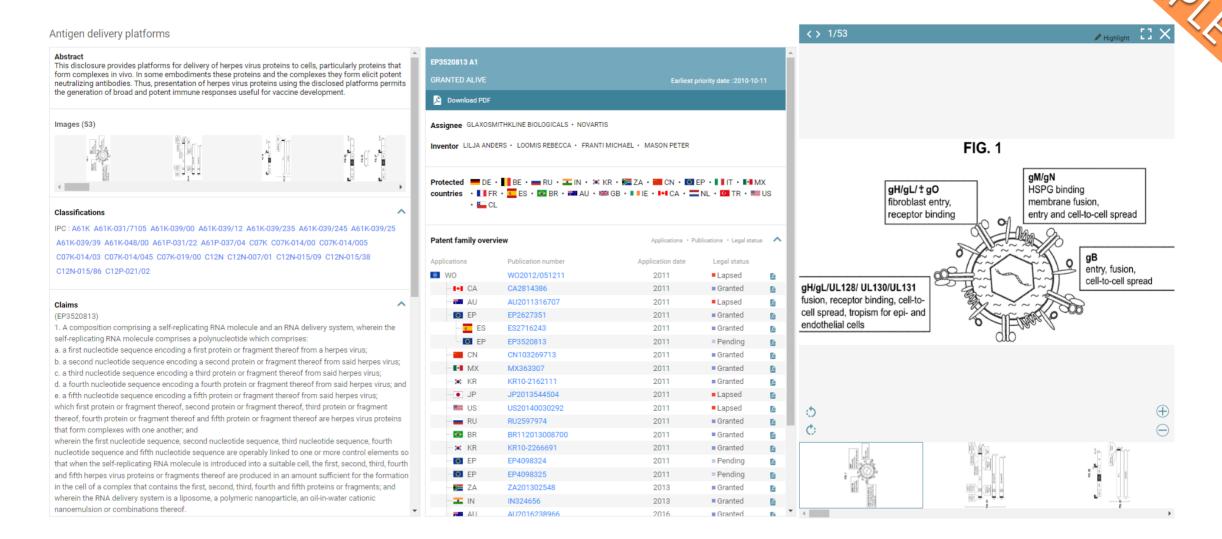
Useful patent database allows multi-criteria searches





Excel file with all patents analyzed in the report

Online database with updated patent statuses and hyperlinks to the original documents





ORDER FORM

saRNA vaccines

Patent Landscape Analysis – February 2023

Ref.:KM23002

SHIP TO Name (Mr/Ms/Dr/Pr): Job Title: Company: Address: City: State: Postcode/Zip: Country: VAT ID Number for EU members: Tel: Email: Date:

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Bank: Banque Populaire Méditerranée, CAP 3000 Quartier du lac, 06700 St Laurent du Var, France

IBAN: FR76 1460 7003 6360 6214 5695 139

BIC/SWIFT: CCBPFRPPMAR

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RETURN ORDER BY

E-mail: contact@knowmade.fr

Mail: KnowMade S.A.R.L., 2405 route des Dolines, 06902 Valbonne Sophia Antipolis, FRANCE

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- 2.4 The mailing is operated through electronic means either by email via the sales department. If the 4.7 The deadlines that the Seller is asked to state for the mailing of the Products are given for information 9. GOVERNING LAW AND JURISDICTION Buyer provided that it is informed of the defective formatting within 90 days from the date of the original download or receipt of the Product.
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the right to invoice at the stage in progress, and to take legal action for damages

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6.4 The Buyer shall define within its company point of contact for the needs of the contract. This person will copyrights and will guaranty that the Products are not disseminated out of the company.

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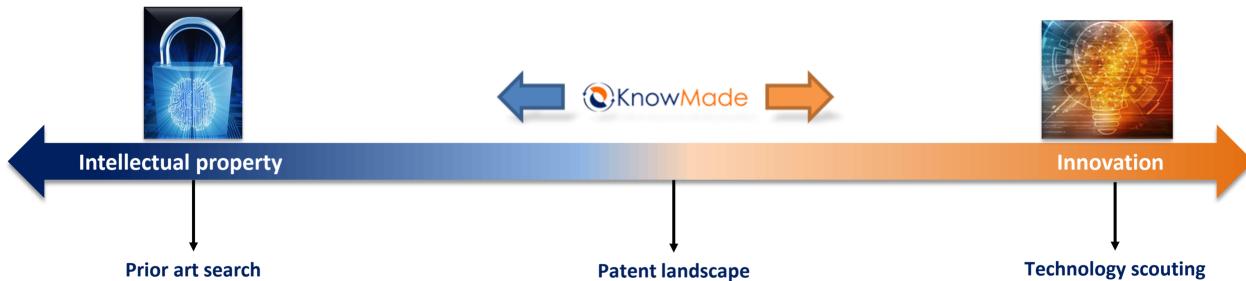
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- ➤ MEMS transducers and sensors
- Optical sources & display

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- Compound semiconductor
- Battery & power managements
- Power electronics



