



Afrigen

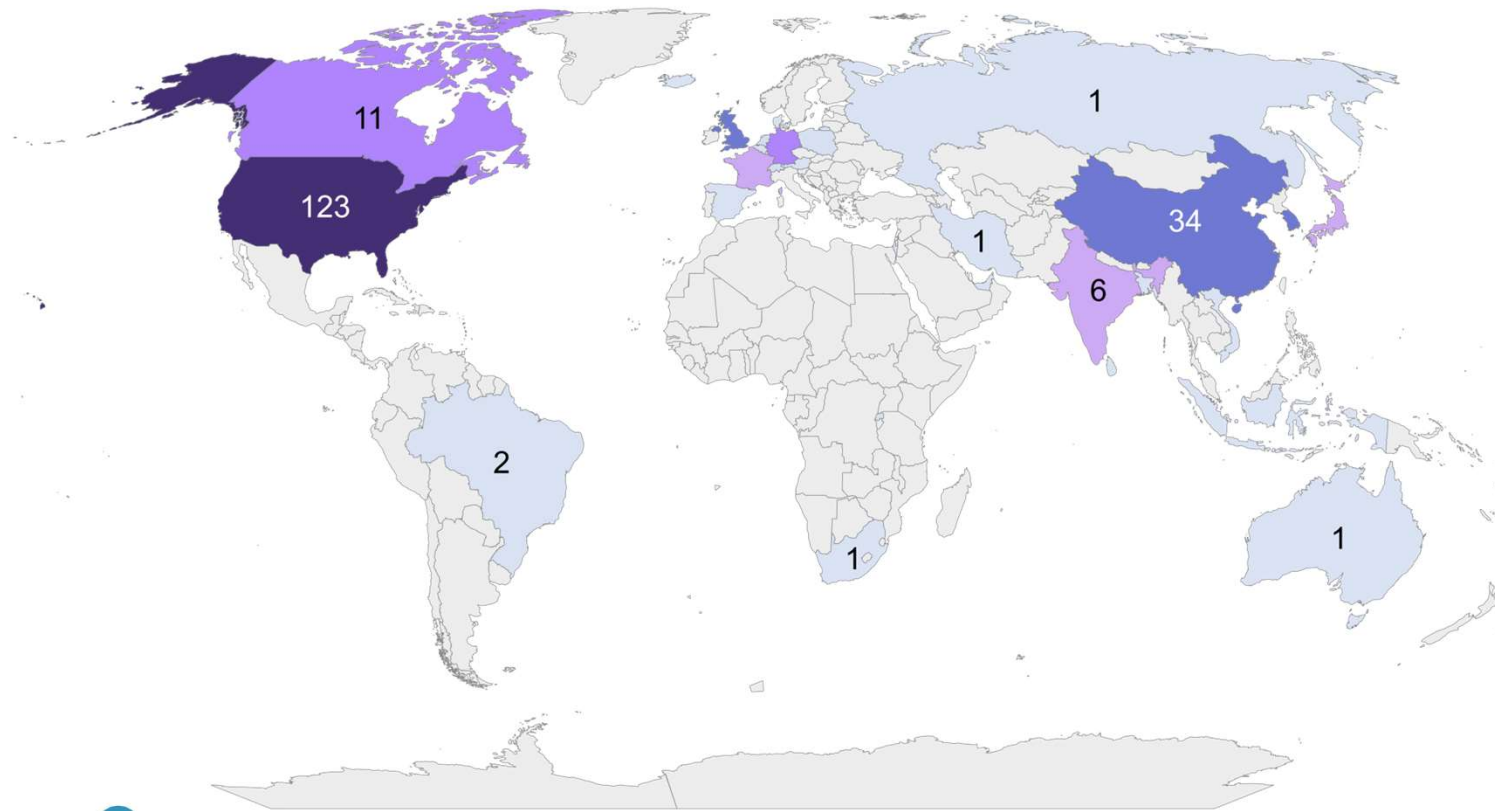
Biologics & Vaccines

An Avacare Health & IDC Company

QUA VADIS mRNA? Innovation for sustainability.

Prof Petro Terblanche
Afrigen

mRNA Companies and Locations: Evolving at speed.

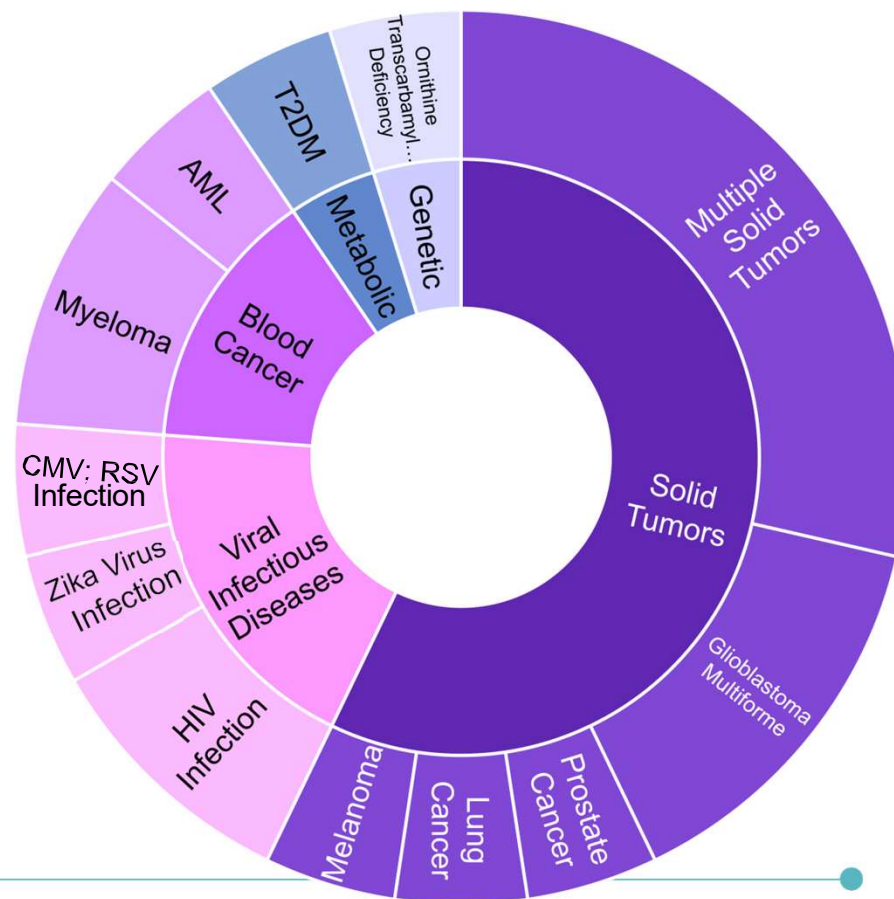
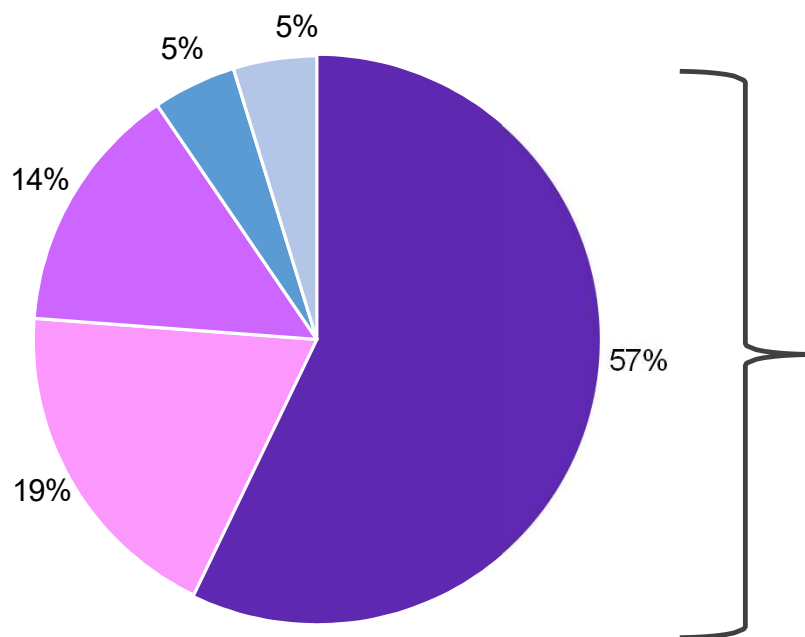


Country	Companies
United States	123
China	34
South Korea	21
United Kingdom	16
Germany	11
Canada	11
Japan	7
India	6
Switzerland	5
Netherlands	5
France	5

Powered by Bing
© Australian Bureau of Statistics, GeoNames, Microsoft, Navinfo, OpenStreetMap, TomTom

mRNA Disease Landscape—What's Next?

- Solid Tumours
- Infectious Diseases
- Blood Cancers
- Metabolic Diseases
- Genetic Disorders



The mRNA Disease Vaccines in Descending order of Sponsors (global data)



- There are currently 39 Sponsors working on the development of various mRNA vaccines for 32 disclosed diseases.
- The COVID-19 Vaccine processes 34 sponsors.
- The RSV disease vaccine development has 5 sponsors.

[Source: mRNA Candidate Database - Public Citizen](#)

Regional Vaccine Development Priorities for Sustainability and Public health Impact: Partnership Driven

Afrigen

Biovac

BioVax Kenya

Bio-Manguinhos

Biofarma

BiologicalE

BioGeneric Pharma

Biovaccines Nigeria

Darnitsa

Incepta Vaccine

Institut Pasteur de Dakar

Institut Pasteur de Tunis

Institut Torlak

National Institute of Health
(Pakistan)

Polyvac

Sinergium Biotech

South

America



Europe

Asia

Dengue
Nipah
Rota

Flu

HPV

Rabies

TB

RSV
COVID-19

Leishmaniasis
YF

Flaviviruses

CCHF
Chikungunya
Disease X
Ebola
Gonorrhea
HepB

HIV
HSV
Lassa
Measles
RVF
Varicella

Africa

Courtesy Pierre Gsell. WHO/MPP mRNA Technology Transfer Programme Meeting. Cape Town. April 2023

mRNA Technology Innovation Strategy



Manufacturing Technology



01

These would assist in streamlining the process and looking at cost effective approaches

Formulation Research



02

This focuses on optimizing vaccine stability, reactogenicity and potency

DNA & RNA Development



03

The sharing of expertise, access to complementary resources and accelerate progression

Additional Disease Targets



04

Expanding preventative measures for unmet medical needs and improving patient outcomes.

Alternative Delivery Methods



05

These methods have the capability of expanding vaccine accessibility, enhance immunization coverage and improve patient acceptance to name a few aspects



RECOGNITION AND APPRECIATION

WHO.
Medicines Patent Pool(MPP).
Funders: France, Belgium, Germany,
Norway, Canada, Switzerland, Alma
Foundation, South Africa, EC/EU. SA
Government DSI.
SAMRC and SAMVAC consortium.
Biovac.
Civil Society Groups.
mRNA Hub Steering Committee.
mRNA Hub Scientific Advisory Committee.
PATH.
NIH/VRC.
Curapath.
Equipment and technology
suppliers.
University of the Witwatersrand, NICD,
CeBER-UCT, PCDDP NWU, and other SA
Universities.
Afrigen Team and Supporting
Stakeholders and Shareholders.

