## **COVID-19 'VACCINE': MATTERS ARISING**

BY

Tatfeng YM, PhD, FMLSCN, FWAPMLS

Department of Medical Laboratory Science
Niger Delta University
Wilberforce Island
Bayelsa State

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## **Outline**

- Overview of vaccines
- Types of Vaccines
- Covid 19 Vaccines
- -Concerns
- -Conclusion

# WHAT IS A VACCINE?

Train the immune system against a pathogen and create antibodies for future infections

# **TYPES OF ANTIGENS**

- Fragments of pathogen
  - **OSurface protein**
  - Surface polysaccharides
  - ORNA
  - **omRNA**
  - ODNA
- Weakened pathogen (e.g.attenuated virus)
- Killed pathogen

# TYPES OF VACCINES

- Live, attenuated vaccines: MMR
- Inactivated vaccines: IPV
- Toxoid vaccines: Diphtheria, tetanus
- Subunit vaccines: Pertussis
- Conjugated vaccines: Hib
- DNA/RNA/mRNA vaccines: COVID-19

## COMMON COMPONENTS OF VACCINES

## **Active components**

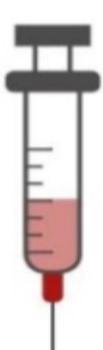
- Antigen
  - Virus, Bacteria, Toxin

## Adjuvants

- Enhance immune response to vaccine
  - Aluminum

## **Antibiotics**

- Prevent bacterial contamination
  - Neomycin, Gentamycin Polymycin B



#### **Preservatives**

- Prevent contamination e.g., repeated puncture of a multi-dose vaccine vial
  - Magnesium, Thimerosal

## Stabilizers

- Protect the vaccine from adverse conditions such as the freeze-drying process
  - Sugar : Lactose, Sucrose
  - Amino acid : Glycine
  - Protein : Gelatin, Albumin

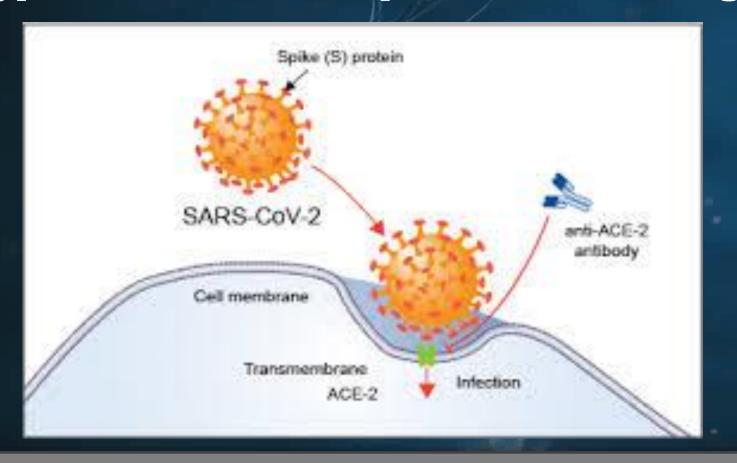
## **Trace components**

- Left over from vaccine production process
  - Formaldehyde

Access from www.FDA.gov 30 May 20

## **IMMUNE RESPONSE TO A VIRUS**

Typical immune response in the lungs

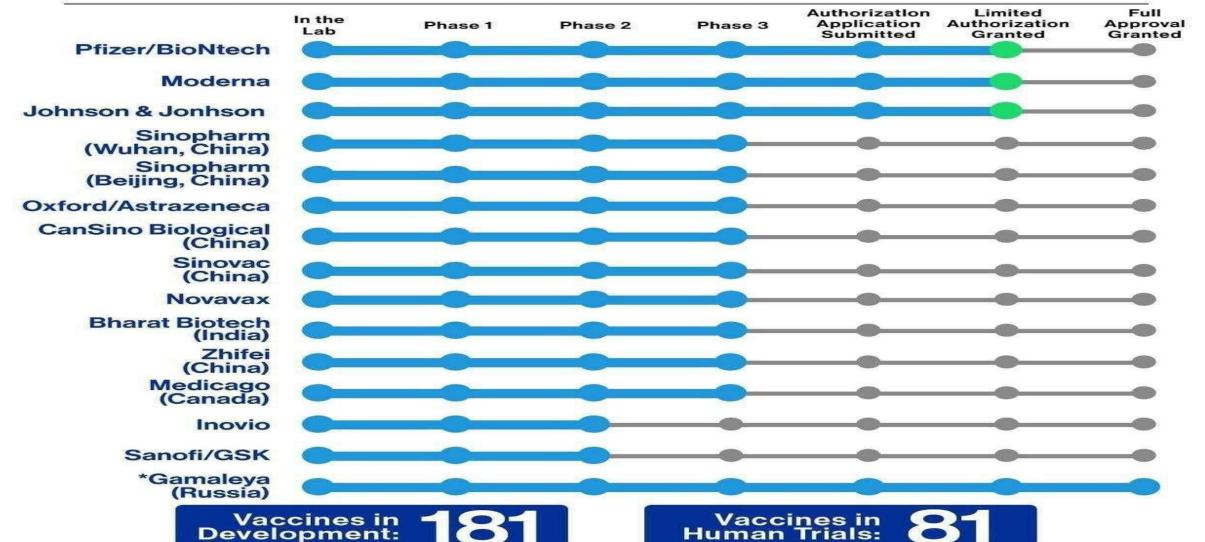


The surviving strategies of the body amid the infection is a function of Vitamins A & D

Respiratory organs: Lungs, Pharynx, Larynx, Trachea and Bronchi

## Covid-19 Vaccine Watch

LEADERS IN THE GLOBAL COVID-19 VACCINE RACE



Last Updated: 3/09/21

\*ABC has not been able to independently fact check its claimed safety or effectiveness

SOURCE: WHO



# Coronavirus vaccines compared

	AstraZeneca 🕏	<b>Pfizer</b>	moderna	Johnson-Johnson
Common side effects	Injection Site:  • Pain  Rest of body:  • Headache  • Tiredness  • Muscle ache  • Fever  • Chills  • Joint ache  • Nausea	Injection Site:  • Pain  • Swelling  • Redness  Rest of body:  • Headache  • Tiredness  • Chills	Injection Site:  • Pain  • Swelling  • Redness  Rest of body:  • Headache  • Tiredness  • Chills	Injection Site:  • Pain  • Swelling  • Redness  Rest of body:  • Headache  • Muscle ache  • Fever  • Fatigue  • Nausea
Trial Effective- ness *	62%, 14 days after 2nd dose	95%, 28 days after 2nd dose	94%, 14 days after 2nd dose	66.9%, 14 days after shot
Cost/dose	\$4 (£3)	\$20 (£15)	\$15 — 25 (£10 — 18)	\$10 (£7)
Protection starts	15 days after 2nd shot; some 22 days after 1st	7 days after 2nd shot; some 12 days after 1st	14 days after 2nd shot; some 14 days after 1st	14 days after the shot

Sources: AstraZeneca; CDC; EMA; FDA; GOV.UK; Johnson & Johnson; Medicines & Healthcare products; Moderna; Pfizer; Regulatory Agency; WHO \*Initial trial affectiveness against COVID-19 with symptoms

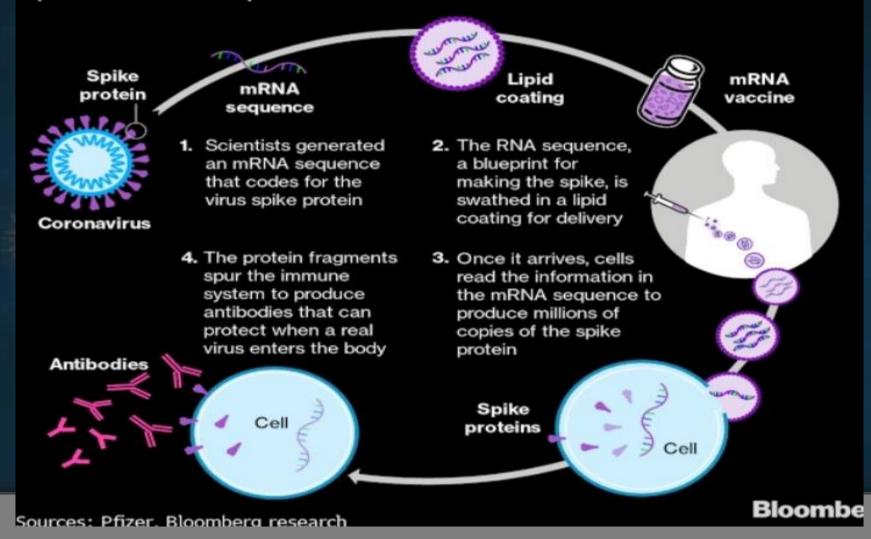
INSIDER

# Qualitative and Quantitative composition of the Astrazeneca/Oxford vaccine currently in use in Nigeria

- Chimpanzee Adenovirus, genetically modified with SARS-CoV-2 spike protein sequence
- L-Histidine\*\*L-Histidine hydrochloride monohydrate\*\*Magnesium chloride\*\* hexahydrate\*\*Polysorbate 80\*\*Ethanol\*\*Sucrose\*\*Sodium chloride\*\*Disodium edetate dihydrate
- And it is produced in genetically modified human embryonic kidney cells

(1)

# How does an mRNA Vaccine work?



# **How is it different?**

## mRNA Vaccine

## **Traditional Vaccine**



#### Components

mRNA (blueprint of protein)

#### Production

Faster because mRNA molecules are easier to produce

#### Process

Components are injected into the arm and serve as instructions for the body to make microbial protein

#### R&D

Antigen determined for immune stimulation

#### Result

Teaches the body to protect itself against a microbe

#### Components

Microbial protein or inactive microbe



#### Production

Slower and more difficult to produce the right type of protein

#### Process

Components are made in a lab and injected into the arm to stimulate immune response mRNA vaccine is synthetic genetic material from non-human sources

The new

Vanderbilt Vaccine Research Program | Vanderbilt Institute for Infection, Immunology and Inflammation

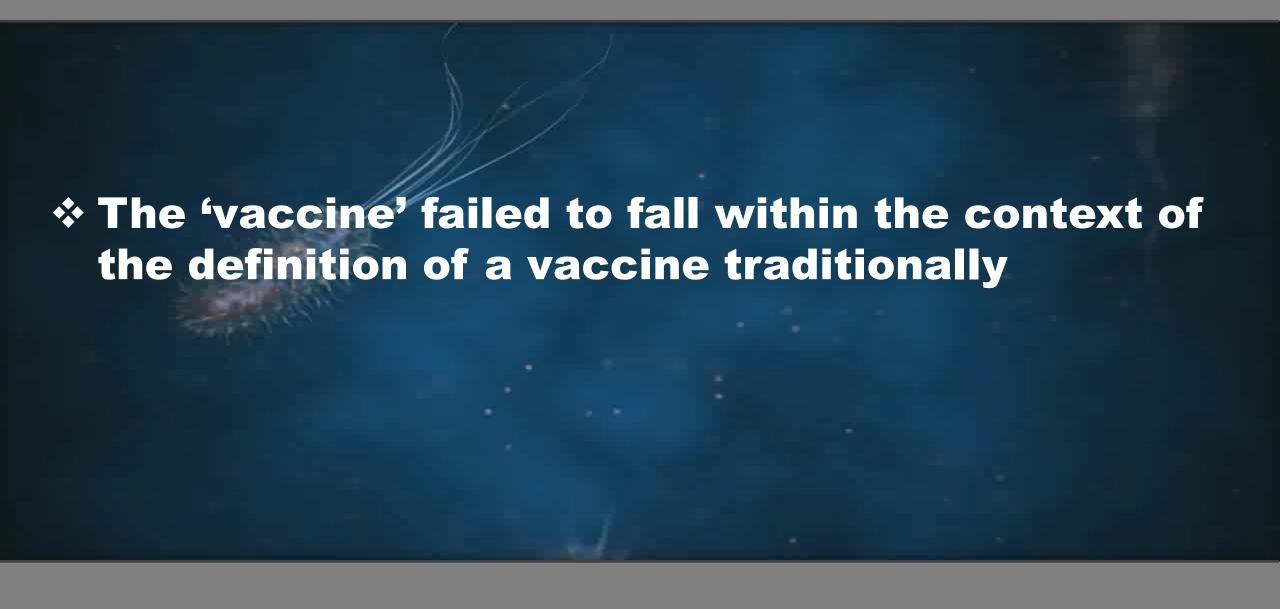
# Concerns

- Minimal testing
- Up regulation of pro-inflammatory cytokines and type 1 interferon associated with autoimmune disease

# Adverse effects

- Blood coagulation
- Severe allergy

Classical vaccines were designed to take 10 years to develop; Pfizer did it in about 9 months. Astrazeneca is a Recombinant Vaccine with the Adenovirus which may also illicit or trigger an immune response



"As of this writing, no correlate of protection for SARS-COV-2 has been established'
'No existing vaccines have been shown to be effective against infection with any beta coronavirus, the family that includes SARS-CoV-2, which causes Covid-19"

## **Questions begging for Answers**

- 1. Why are nations compelled to sign the indemnification certificate?
- 2. What system is in place to track, report and manage complications that may arise as a result of vaccination in Nigeria?
- 3. Why the race for Covid vaccine development when much more fatal diseases such as Ebola, HIV, Tuberculosis and Malaria are plaguing sub-Sahara Africa with no hope of a successful vaccine trials?
- 4. Who really benefits from Covid 19 vaccination?
- 5. Will reduction in Covid incidence and prevalence in sub Sahara Africa be attributed to vaccination?

# Vaccine associated fatalities

- Portuguese health worker, 41, dies two days after getting the Pfizer covid vaccine as her father says he 'wants answers'. (5)
- Doctor's Death After Covid Vaccine Is Being Investigated (6)
- 75-year-old man dies of heart attack shortly after receiving coronavirus vaccine (7)
- Health care worker dies after second dose of COVID vaccine, investigations underway (8)
- Person in Placer County dies shortly after being given COVID-19 vaccine, authorities say(9)
- 23 die in Norway after receiving Pfizer COVID-19 vaccine: officials(10)
- South Dakota reports 2 deaths recorded after COVID-19 vaccination (11)
- After COVID
- Auburn Woman Warns She Saw Grandfather's Aid Die Vaccine(12)
- Dozens of care home residents died with Covid before second jab (13)
- Family, community mourn loss of Provo NICU therapist to COVID-19 (14)

# Conclusion

Ultimately, I do not seek to make conclusions about the information laid out, nor do I want to provide much personal opinion on the matter. The decision to receive any vaccine is yours and yours alone. However I hope that my presentation helps you to be better informed and better equipped for that decision.

Africans must wake from their slumber, We must strive to find 'african solutions' to 'african problems'

## References

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- 7. <a href="https://www.i24news.tv/en/news/coronavirus/1609155691-israel-75-year-old-man-dies-of-heart-attack-shortly-after-receiving-coronavirus-vaccine">https://www.i24news.tv/en/news/coronavirus/1609155691-israel-75-year-old-man-dies-of-heart-attack-shortly-after-receiving-coronavirus-vaccine</a>
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- **12...** <a href="https://sacramento.cbslocal.com/2021/01/25/no-link-found-yet-auburn-woman-warns-she-saw-grandfathers-aid-die-afte-r-covid-vaccine/">https://sacramento.cbslocal.com/2021/01/25/no-link-found-yet-auburn-woman-warns-she-saw-grandfathers-aid-die-afte-r-covid-vaccine/</a>
- **13.** . <a href="https://metro.co.uk/2021/01/24/dozens-of-care-home-residents-died-with-covid-after-first-jab-13956611">https://metro.co.uk/2021/01/24/dozens-of-care-home-residents-died-with-covid-after-first-jab-13956611</a> (After the first jab.)
- **14.** https://www.fox13now.com/news/coronavirus/local-coronavirus-news/family-community-mourn-loss-of-provo-nicu-thera pist-to-covid-19 (\*The NICU therapist had received the COVID vaccine 6 days before testing positive for the virus and eventually passing.)

Of course, the deaths occurring in the articles above are not stated as considered to be caused by the vaccine.

# THANK YOU!

