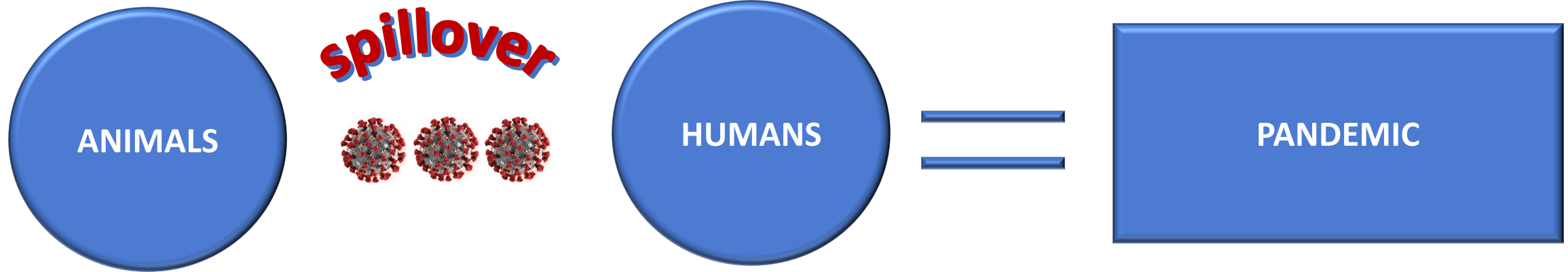


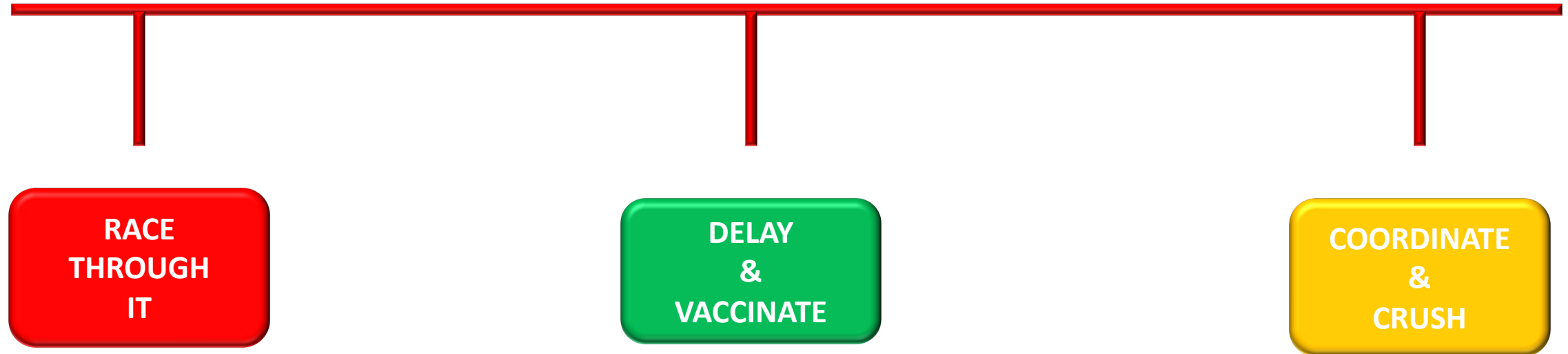
LICEO CLASSICO "GIOACCHINO DA FIORE" - RENDE (CS) - 20/21

Prof.ssa Fabiola Salerno

TO SUMMARIZE:



THREE MAIN OPTIONS TO HAVE IMMUNITY



THREE MAIN OPTIONS TO HAVE IMMUNITY

**RACE
THROUGH
IT**

**HUNDREDS OF
MILLIONS OF
DEATHS**
-from the virus
-from the collapse
of health care
systems

**DELAY
&
VACCINATE**

**HUNDREDS OF
THOUSANDS OF
DEATHS**
Widespread testing to:
-identify carriers
-quarantine the
infected and their
“interactions”
-physical distancing
and masks
-stop-and-go work
periods

**COORDINATE
&
CRUSH**

LOW LOSS OF LIFE
Global pandemic
=
Global response
But...
*Is the world we're
living a giant
interconnected
system?*
Strong risks of
continuous
new waves

THE BEST OPTION IS N.2
Protection is continuous with vaccines

POSITIVE LEGACY: THE BREAKTHROUGHS

VACCINE

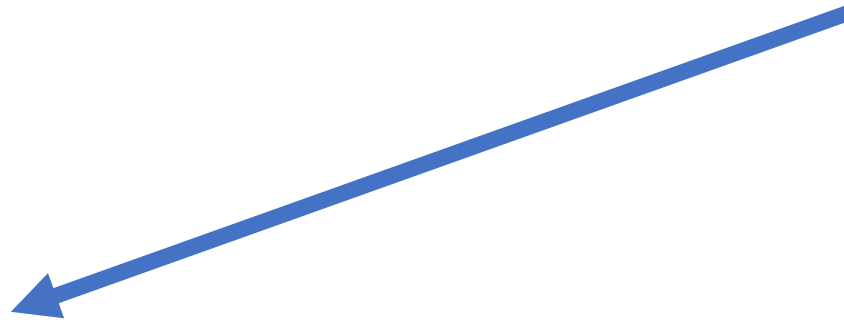
- Research on existing works
- Lots of money invested by the Governments and by the Pharmaceutical Industries
- Easier testing because of more disease
- Speed in the approval process

SO

- No steps skipped
- No corner cut

IT IS A NEW TYPE OF VACCINE: AN mRNA VACCINE

LIVING CELLS CONTAIN BOTH DNA AND RNA



DEOXY RIBONUCLEIC ACID

The double helix containing the genetic information

RIBONUCLEIC ACID

It decodifies the info existing in the DNA

mRNA

A type of RNA which translate the info from DNA into proteins

mRNA Vaccine

It contains the instructions to produce one specific protein, the SARS-COV-2 spike protein

CREATING MEMORY

OUR IMMUNE CELLS
recognize this viral protein
and make antibodies
against it, so against
SARS-COV-2

IF THE ACTUAL VIRUS
introduces in our body,
the antibodies recognize
the spike protein
and destroy it

mRNA vaccine
DOES NOT CHANGE
OUR DNA and it survives in
our cells for a very short
period of time – **A FEW HOURS**

Many traditional vaccines used a killed
or weakened form of a virus to prompt
an antibody response.
mRNA vaccines **DOESN'T WORK LIKE**
THIS: they do not contain the virus

IS THIS THE END OF PANDEMIC?

SIDE EFFECTS after the vaccine?
Probably yes but, as there is no virus in our cells, our immune system is triggered to respond, so our body is building immunity

We need two shots to receive full protection but scientists still don't know
HOW LONG IMMUNITY WILL LAST

Even with vaccines,
THE PANDEMIC WILL END SLOWLY
and part of this is because vaccination will not be immediate

We are 7,8 billion inhabitants: we need 70/80% of people vaccinated to achieve some kind of herd immunity