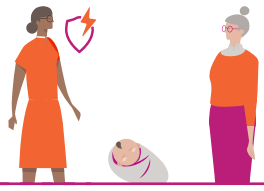
Adjuvants and our Adjuvant Systems

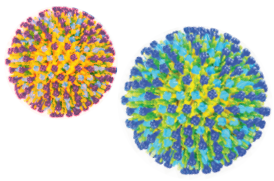
UNDERSTANDING THE NEED FOR AN IMMUNE SYSTEM BOOST

Several factors can affect the body's immune response to pathogens, as well as how people respond to vaccines. These include[1,2]:

A vaccine antigen might not be suitable or immunogenic enough on its own.



Certain population-specific challenges exist with regard to immune system response, such as infants, the immunocompromised and older adults.

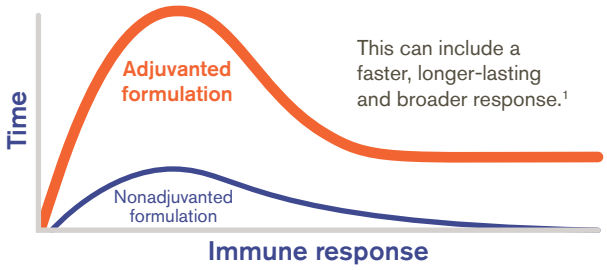


Different strains or subgroups of a pathogen can evade immune detection or cause more serious disease, even in healthy people.

We build these scientific insights into the design of vaccines to protect people from infectious diseases.[1]

THE ROLE OF ADJUVANTS AND ADJUVANT SYSTEMS

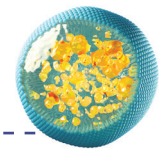
Adjuvants are designed to enhance and modulate immune responses to vaccine antigens.[3]



This can include a faster, longer-lasting and broader response.[1]

The word 'adjuvant' comes from 'adjuvare' in Latin meaning 'to help.'[4]

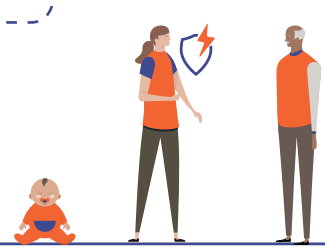
We have developed Adjuvant Systems containing one or more immunostimulants in specific formulations designed to provide immune responses 'tailored' to target diseases.[1,5,6]



One of our Adjuvant Systems containing different ingredients.

Doing more with less:
Adjuvants can allow more vaccines to be produced using less antigen, which can be important in pandemic situations, and increase vaccine access for all.[1]

Adjuvant Systems can also help to provide broader protection or cross-protection against related disease-causing pathogens.[1]



The right Adjuvant System can be an important component of vaccines against infections that especially impact the young, older people or those with weakened immune responses.[1]

PROVEN TECHNOLOGY

For nearly 30 years, our scientists have been working to deliver effective adjuvanted vaccines, resulting in millions of doses, including:

During the H1N1 influenza pandemic, it is estimated that approximately **90 million doses** of H1N1 pandemic vaccines were administered, including at least **9.5 million doses** to children and 300,000 doses to pregnant women.[7]

We are collaborating with several organisations on COVID-19 vaccines by providing access to our adjuvant technology.

In total, more than **100 million doses** of our adjuvanted vaccines have been administered worldwide since the 1990s.[7,8]

The adjuvant approach is heralding the way for effective vaccines tailored to the unique needs of specific population groups. With the broadest portfolio of vaccine platform technologies in the industry—including adjuvants, adenovectors, bioconjugation, mRNA and reverse vaccinology—our people, technologies and partnerships have the potential to benefit global human health.

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