Avoid Panic and be Prepared for the Next Pandemic

Cerba Research

Transforming research, advancing health together.

The world was caught off-guard by the COVID-19 pandemic, which resulted in millions of lives lost and significant economic and social disruptions. Despite the efforts of governments, healthcare professionals, and pharmaceutical companies, the response was not enough to contain the spread of the virus and prevent its devastating impact. Lessons learned from this crisis must be used to prepare for the next pandemic. In this whitepaper, we explore whether the pharmaceutical industry is prepared for the next pandemic and what steps should be taken.

Pharmaceutical companies have played a vital role in the response to the COVID-19 pandemic by developing and producing vaccines and treatments. However, this pandemic also highlighted the limitations of the current vaccine development and manufacturing processes and exposed the vulnerabilities in the global healthcare system – a lack of preparedness for a pandemic.

Pharmaceutical companies must be ready to respond quickly to a pandemic, which involves the fast development and production of safe, effective vaccines and anti-viral treatments. This requires the necessary infrastructure, expertise, and resources to scale up production and distribution to meet the demand.

Why is the World Not Prepared For Pandemics?

- Pandemics are unpredictable in nature. The next pandemic may be caused by a new virus or an existing one that mutated. For example, the avian influenza viral strain H5N1, Lassa Virus, and MERS-CoV all have the potential to cause another pandemic. It is difficult to predict the timing, location, and severity of a pandemic.
- There is a lack of investment in preparing for pandemics. Many pharmaceutical companies are focused on developing medicines for the treatment of chronic diseases, which have consistent impacts on global health and provide a more stable, global revenue stream.
- Developing and producing vaccines and anti-viral therapies requires significant resources and time. Regulatory approval can be a lengthy and complex process, and appropriate manufacturing facilities must be available to produce vaccines and viral therapies.

How to Become More Pandemic-Prepared

- Increased investment in research to understand viral diagnosis and transmission and the development of effective vaccinations and treatments. This requires collaboration between governments, pharmaceutical companies, and academic institutions.
- Improve the manufacturing infrastructure for pandemic vaccinations and treatment. Companies must be able to scale up production quickly to meet the demands during a pandemic. This requires investment in manufacturing facilities and the development of new technologies and processes.
- Pharmaceutical companies need to work with governments and regulatory bodies to streamline the approval process for pandemic treatments and vaccines for quicker development of approved medicine.

Be Prepared For the Next Pandemic With Cerba Research

Understanding Viral Epidemiology and Pathogenesis

At Cerba Reserur, the Virology lab is dedicated to the study of viruses, with facilities and expertise highly specialized in the development and application of tailor-made diagnostic assays. Cerba Research focuses on developing and implementing assays to detect and quantify specific molecules related to pathogenic viruses (such as viral DNA/RNA and antibodies to specific viral antigens) or organisms in a clinical sample. These assays are vital to understanding the epidemiology and pathogenesis of viral infections, developing vaccines and therapeutics, and monitoring viral outbreaks for increased pandemic preparedness.

We use cutting-edge technologies to ensure accurate and reliable results for pre-clinical and clinical trials. Our technical capabilities include fit-for-purpose validation, specialized pre-clinical models, tissue biomarker assay optimization, DNA/RNA/amino acid sequencing, and much more. Furthermore, we can analyze the immune responses triggered by vaccines or anti-viral therapy. Our techniques, knowledge, expertise and infrastructure will help encourage preparedness for the next pandemic.

Proof of Concept

During the coronavirus pandemic, Cerba Research persistently worked on finding treatments for patients all around the world. A very tangible example of our knowledge, dedication to working with the pharmaceutical industry, and achievement of rapid market approval of life-saving medicines is Celltrion's Regkirona, CT-P59 monoclonal antibody treatment for COVID-19 patients. This aligned with our mission to improve global health through accelerating preventive and therapeutic solutions

Full article: https://www.ema.europa.eu/en/news/covid-19-ema-recommends-authorisation-two-monoclonal-antibody-medicines

Robust Clinical Trial Support

Our clinical trial support involves a range of services and resources to assist with the various stages of pre-clinical and clinical trials, including:

A Study Design Unique to Our Clients' Needs

Study design and planning is a crucial aspect of conducting a successful pre-clinical/clinical trial. Cerba Research takes all the necessary steps to design a study that encompasses all your specific requirements. We will assign you a global project manager who recognizes the complex needs of your study and will work alongside you to lead your project to success on time and within your budget. Through the implementation of a global project manager, Cerba Research will track and monitor the project performance throughout its entirety.

Our project managers will establish an expert team specific to your project, including a trial set-up manager, experts on the subject matter, a data analyst, and a quality assurance and operations team. Dedicated to assisting investigator sites, our multilingual investigator site-focused team can also offer support whenever required, ensuring the successful delivery of your study results. All our services work in alliance with our global study database for standardized and consistent data acquisition, required to prepare for pandemics.

Informative and Reliable Results

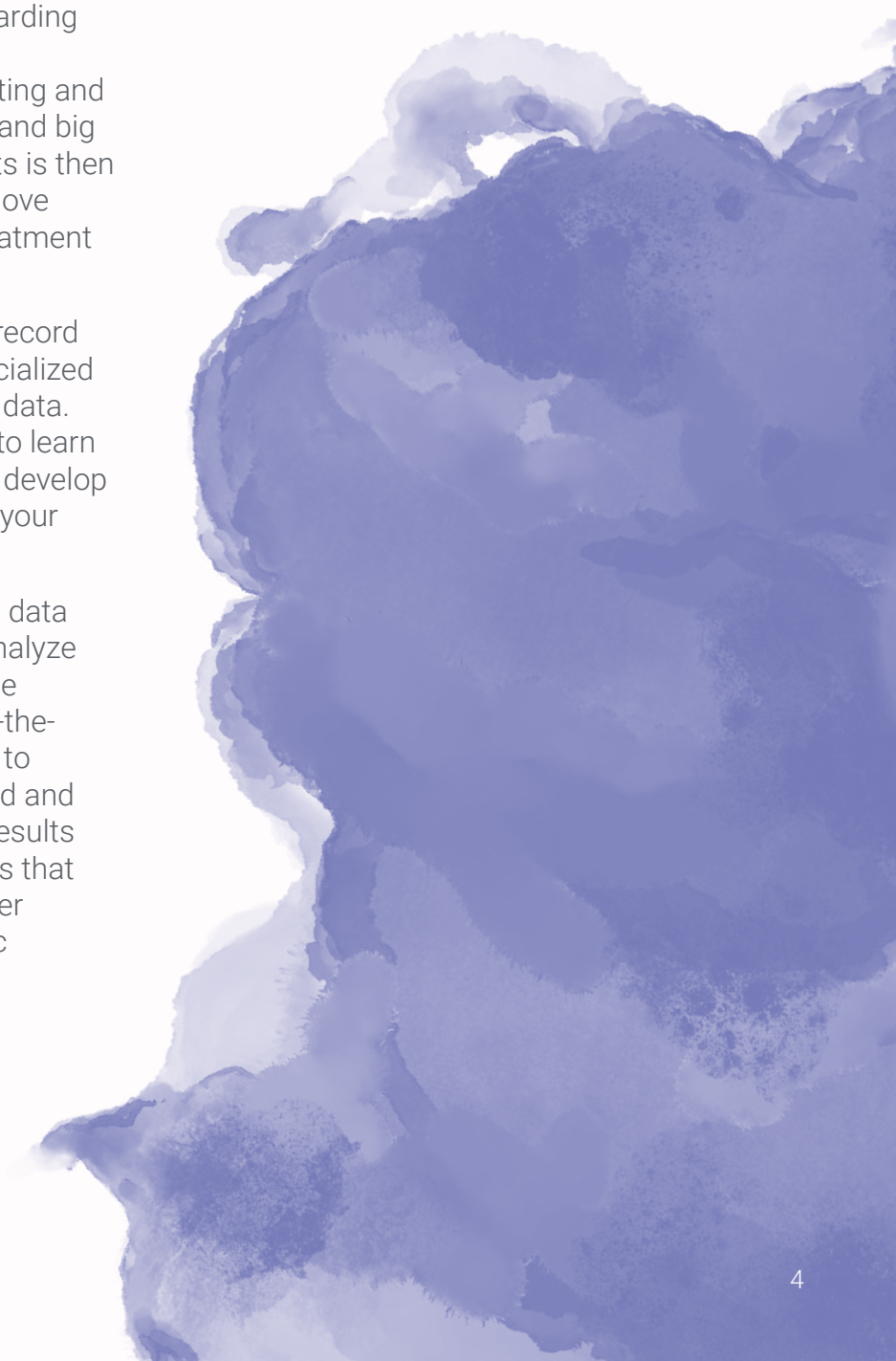
Data analysis is a critical component of clinical trials, as it ensures the results obtained are reliable and informative, particularly regarding the safety and efficacy of new medical treatments. The process involves collecting and interpreting data from multiple sources and big databases. Interpretation of these results is then used to guide decisions about how to move forward with the development of the treatment plan to improve treatment efficacy.

Cerba Research has an extensive track record of data analysis and has developed specialized pipelines specific to the analysis of viral data. Our data analysis team is always ready to learn and expand their expertise to refine and develop our data analysis pipelines to align with your study's specific requirements.

Proficient in examining various complex data sources, our bioinformatics team can analyze sample genetic variants at the nucleotide and amino acid levels. With our state-of-the-art software pipelines and commitment to efficiency, Cerba Research provides Food and Drug Administration (FDA) compatible results with highly competitive turnaround times that can be easily upscaled to a larger number of patients, which is central to pandemic preparedness.

Guaranteed Quality and Regulatory Compliance

Regulatory compliance is an essential part of conducting clinical trials, particularly when it comes to ensuring the safety and welfare of study participants, as well as the integrity and validity of data collected. Cerba Research prioritizes the delivery of high-quality data with a quality management system based on NEN-EN-ISO 15189, GLP, GCLP, GSLP, and elements of GCP to ensure compliance with regulatory requirements.



Our commitment to regulatory compliance, through careful planning, thorough documentation, and adherence to strict protocols, helps to secure robust and reliable results for our clients. Regardless of the country you work in, Cerba Research will provide results that comply with the necessary requirements for your country's regulatory body. Our clinical trial support team provides necessary resources and support to study participants, such as access to counseling or other supportive services, to conduct high-quality research in a safe and ethical manner. Thorough adherence to regulatory compliances allows for faster development of vaccines and therapies for pandemics.

Facilities to Safely Study Highly Contagious Viruses

Cerba Research has extensive experience working with various viruses, such as Influenza, RSV, HBV, HCV, SARS-CoV-2, Highly Pathogenic Avian Influenza, Dengue, Polio Virus, Chikungunya and more. Working with highly contagious viruses requires specialized laboratory facilities designed to prevent the accidental release of a virus into the environment and to protect laboratory workers from exposure. Such facilities are known as Biosafety Level (BSL) 3 and BSL-4 laboratories.

Our BSL-3 laboratories are designed to handle infectious agents that can cause serious or potentially lethal diseases through inhalation, such as SARS-CoV-2. These labs have additional safety measures, such as negative air pressure systems and high-efficiency particulate air (HEPA) filters, to prevent the release of the virus into the environment.

Cerba Research's BSL-3 laboratory personnel are highly qualified and rigorously trained to adhere to strict safety protocols to minimize the risk of exposure to highly contagious viruses. Our facilities, including the Rotterdam Science Tower, are subject to regular inspections and oversight by government agencies such as the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO).

At Cerba Research, we ensure safe and successful study outcomes with extremely pathogenic viruses and promote the development of research techniques for the study of highly prevalent diseases that could cause a pandemic.

Global Viral Monitoring

Cerba Research takes part in important global surveillance programs that monitor and characterize new viral threats to global health. This monitoring includes additional research on viral reference strain development, biomarker discovery, genomics, and immune protection correlates. All of these activities are necessary steps to being more prepared for the next pandemic.

Conclusion

COVID-19 highlighted the fact that the world is not prepared for a pandemic. Pharmaceutical companies have played a critical role in the response to the pandemic, but there is still much to be done to prepare for the next one.

Cerba Research is constantly transforming and innovating viral pre-clinical and clinical research to deliver successful, safe, reliable, and fast results. By working with Cerba Research, companies can better prepare to respond to the next pandemic and save lives.

Get in Touch Today

Cerba Research can offer everything needed to be a trusted partner in preparing for the next pandemic. For more information and advice, reach out to one of our specialists today by contacting us via our website.

www.cerbaresearch.com