

Frequently Asked Questions

1. What is READDI and why was it created?

We can't predict when future pandemics will strike — we only know that they will. That's why the Rapidly Emerging Antiviral Drug Development Initiative (READDI) is urgently pursuing new broad-spectrum antiviral therapies to save lives in the current pandemic and to prevent emerging threats from becoming global catastrophes.

As the COVID-19 pandemic has painfully illuminated, the world cannot afford to be caught unprepared by the next deadly virus. Solving for pandemics requires a unified effort from the initial scientific research through the final drug development process.

READDI will accomplish this by bringing together leaders from the pharmaceutical industry, government, philanthropic organizations and academic research institutions. By focusing this global expertise, READDI can use the powerful resource of time to help protect us all.

2. Who are the key players?

READDI is guided by world-leading authorities in the study of coronaviruses, collaboration and drug discovery. It was co-founded by the University of North Carolina at Chapel Hill (UNC), the University of North Carolina Eshelman Institute for Innovation (UNC EII) and the Structural Genomics Consortium (SGC).

University of North Carolina at Chapel Hill (UNC)

UNC ranked No.1 as a world leader in coronavirus research from Microsoft Academic. The team is led by Dr. Ralph Baric, PhD, who has spent the past three decades as a world leader in the study of coronaviruses and is responsible for UNC's world leadership in coronavirus research. For these past three decades, Dr. Baric has warned that the emerging coronaviruses represent a significant and ongoing global health threat, particularly because they can jump, without warning, from animals into the human population.

University of North Carolina Eshelman Institute for Innovation (UNC EII)

The UNC Eshelman Institute for Innovation was created to provide seed funds for innovation in pharmacy and pharmaceutical sciences that will advance treatments to patients. It provides resources, expertise, and project management to advance new therapeutics, technologies and services towards commercialization.

Dr. John Bamforth, PhD, is the Director of the Eshelman Institute for Innovation. He has over 30 years of experience in the biopharma industry. He also serves on the board of the SGC.

Structural Genomics Consortium (SGC)

The SGC catalyzes research in new areas of human biology and drug discovery by focusing on the human genome. It accelerates research by making its findings available to the scientific community with no strings attached, and by creating an open collaborative network of scientists in hundreds of universities around the world.

Dr. Aled Edwards, PhD, is the founder and chief executive of the SGC. He is a professor at the University of Toronto, visiting professor at the University of Oxford and adjunct professor at McGill University. He has published over 200 papers and his teams have contributed over 4,000 structures into the Protein Data Bank, as of 2019. Dr. Edwards has also founded many companies, including Affinium Pharmaceuticals, which developed a novel antibiotic currently in late-stage clinical trials, and M4K Pharma, the first pharmaceutical company formed explicitly to invent new, and affordably priced, medicines.

3. What are the major goals?

Generate five new antiviral drugs with human safety and dosing data (through Phase 1 clinical testing) in five years to be ready for the next pandemic.

Raise \$500 million overall and \$125 million for the initial launch of our global nonprofit. This initiative will be staffed by the brightest minds, combining scientific excellence in viral epidemiology with biopharma experience to manage drug development.

4. Is this part of a pre-existing initiative or is it new?

READDI is a new initiative that models its research approach on the Drugs for Neglected Diseases' (DNDi) proven "global access" model. It relies upon preexisting synergies and relationships between the pharmaceutical industry, government resources, philanthropic organizations and academic research institutions to forge an innovative, targeted collaboration.

Together, these leaders will leverage existing platforms to accelerate the development of new antiviral drugs. This will make the most efficient use of collaborator energy and share knowledge with universities and experts around the world. It will promote faster drug discovery and bring potentially life-saving drugs to market sooner and more cheaply.

5. How will READDI succeed?

By starting now.

With READDI, researchers and biopharma companies will no longer wait for a market demand to advance their work, nor will they continue to work in slow-moving silos. Academic and pharmaceutical industry partners around the world will collaborate to place antiviral therapies "on the shelf" before the next virus emerges. This can be accomplished by focusing on the antiviral families most likely to cause a pandemic: coronaviruses, alphaviruses and flaviviruses.

Viruses work by manipulating infected cells to replicate. However, closely related viruses change cells in the same way. That means there is an opportunity to make drugs targeting cellular changes without detailed knowledge of a viral target's biochemistry. In other words, through READDI's research, the scientific community can get a massive and potentially life-saving head start on creating an antiviral treatment for a future pandemic before it even happens.

6. Are antivirals the right solution for addressing pandemic preparedness?

The reality is that we will need a vast array of solutions to address pandemic preparedness. It's critical that efforts to develop vaccines for the future continue, but we want to complement that by establishing ourselves as the world leader in developing antivirals. As the COVID-19 crisis has shown, short-term antiviral drugs are absolutely essential to act as a bridge until a vaccine is available, or even to serve as a primary treatment for populations who may not have access to a vaccine.

7. How will the initiative unfold? For instance, what will each partner group bring to the table, how do they interface, what are anticipated benefits to each party?

READDI offers a unique collaborative opportunity that will bring together cross-disciplinary teams from the start. For example, our pharmaceutical partners will be connected to academic scientists instantly to make sure the science pursued makes practical sense and ensures quick, safe and effective development.

Universities will take the lead in discovering and validating viral targets, at which point the government and pharmaceutical partners will join in the process of identification, candidate selection, and preclinical studies. From there, pharmaceutical advisors will lead Phase I testing, translating the result of each partner group's science and research into usable therapies.

