

COVIREIVAC Platform: COVID-19 Vaccine Research Continues with the Launch of New Projects



New projects being launched within the framework of COVIREIVAC. © Adobe Stock

Launched in October last year, the purpose of the COVIREIVAC platform coordinated by Inserm and F-CRIN in conjunction with 32 university hospitals and a network of 11 immunology laboratories is to conduct and promote first-class clinical vaccination research in France. Since then, some 50,000 volunteers have signed up to participate in that research and improve knowledge of these new vaccines, making this is an unprecedented initiative in our country. COVIREIVAC is steered by Inserm and the clinical operational aspects of the various university hospitals are coordinated by the Paris Hospital Group AP-HP. In addition to France's participation in the clinical trial evaluating the efficacy of two doses of Janssen's vaccine candidate (already licensed for use with one dose), which began in February, other ambitious projects are being launched within the framework of COVIREIVAC.

Although several COVID-19 vaccines are now available, it is imperative to continue research in order to deepen scientific knowledge, particularly in terms of the duration of protection afforded by the vaccines and the quality of immune response – including in those whose health conditions affect their immunity.

The objective of the clinical trials coordinated by COVIREIVAC is to provide answers to these research questions. The CoviCompare trials and the COV-POPART cohort are expected to contribute data that will be important to the vaccine strategy.

The objective of the CoviCompare trials is to study the immunogenicity of different COVID-19 vaccines, i.e. the immune responses they induce, particularly in those aged 65 and over compared with younger adult populations.

This research is expected to provide a better understanding of how the available COVID-19 vaccines work and will guide their use to achieve optimal efficacy in the different population types. The participants, all of whom are vaccinated (there is no control arm), will be followed up for a period of two years. The results will be analyzed and compared between age groups in order to test immune response intensity and duration and provide information for use in deciding, if applicable, whether or not boosters will be needed according to age and/or immune status.

AP-HP-CoviCompare-m: refining knowledge of the immune responses of people aged 65 and over vaccinated with Moderna

Moderna's COVID-19 vaccine is based on messenger RNA technology. Already tested on more than 30,000 people in the USA, this vaccine has proven to be 94.1% effective in the general population and 86.4% effective in people over 65. It is now being used in France.

Sponsored by the Paris Hospital Group AP-HP, this trial began on February 12 of this year and is ongoing in six French centers: Créteil (Henri-Mondor Hospital AP-HP), Lille, Lyon, Marseille, Paris (Cochin Hospital AP-HP), and Saint-Étienne.

In concrete terms, the trial envisages the creation of three groups of 60 participants:

- The first whose participants are between 18 and 45 years of age
- The second whose participants are between 65 and 74 years of age
- And the third whose participants are aged 75 and over

The volunteers will each receive two injections of the vaccine, 28 days apart.

ANRS0002S CoviCompare-P: refining knowledge of the immune responses of people aged 65 and over and COVID-19-experienced individuals vaccinated with Pfizer/BioNTech

The messenger RNA vaccine developed by Pfizer/BioNTech – the first to be validated in Europe – has shown 95% efficacy after two doses, following testing in over 44,000 people. The French National Authority for Health (HAS) has recently published an [opinion](#) (only available in French) recommending a single vaccine dose for people having previously contracted COVID-19.

Sponsored by ANRS | Emerging Infectious Diseases, the autonomous agency within Inserm tasked with coordinating COVID-19 research, this trial began on March 8 of this year. It is taking place in 11 centers: Créteil, Nantes, Caen, Clermont-Ferrand, Lyon, Nîmes, Brest, Tours, Strasbourg, and Paris (Saint Louis and Cochin).

The objective is to evaluate in detail the immune responses induced by the Pfizer/BioNTech vaccine in people aged 65 and over, and to compare those of people having already contracted COVID-19 with those of people who have never had it.

The participants will be assigned to the same age groups as for CoviCompare-m in addition to three other categories (150 people who have never contracted COVID will receive two vaccine doses and 150 participants having already had COVID will receive one).

ANRS0001S COV-POPART: a vaccine cohort to evaluate immune responses to COVID-19 vaccines in specific populations

COV-POPART (the COVID-19 special populations vaccine cohort), sponsored by ANRS | Emerging Infectious Diseases, is a national cohort that will include a total of 10,500 participants across 35 centers, and has been labelled a national priority by France's interministerial research working group.

The project has been constructed with over 10 national and international learned societies and seven patient associations (France Rein – Transhépate - ARSEP - CNAO - FFD – EGMOS – TRT5 CHV*), which will also play an active role in recruiting and following up participants.

The objective of the cohort is to evaluate the production of antibodies against COVID-19 in 8,650 vaccine recipients with diseases that might affect their immunity: HIV-1, diabetes (types 1 and 2), obesity, autoimmune and systemic autoinflammatory diseases (vasculitis, lupus, etc.), chronic inflammatory rheumatism, multiple sclerosis (or inflammation of the optic nerve), cancer (even without treatment for the previous 2 years), allotransplant recipients, solid organ transplant recipients (lung, liver, kidney, heart, pancreas), chronic renal failure (stages 4 and 5), and hypogammaglobulinemia (low immunoglobulin levels in the blood).

In order to compare their immune responses, a control group of 1,850 vaccinated individuals without these diseases was also recruited.

The cohort should also make it possible to identify potential vaccine failures and study the role of the variants in those failures. Participants will be followed for a period of two years after the last injection of the vaccine, with the help of the COVIREIVAC centers and 4 additional centers mobilized for this project. This cohort will provide essential data for vaccine policy in these vulnerable populations that are at particular risk of developing severe forms of COVID-19.

*France Rein – Transhépate - ARSEP French foundation to aid multiple sclerosis research - CNAO French collective of associations for people with obesity – FFD French federation of diabetics – EGMOS French association for bone marrow transplant recipients – TRT5 CHV French collective of associations against HIV, hepatitis and STIs.

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