VAC4EU Postauthorisation Effectiveness Study of BIMERVAX® Vaccine in Europe

First published: 21/10/2024

Last updated: 13/02/2026

Study Planned

Administrative details

EU PAS number

EUPAS1000000337

Study ID

1000000337

DARWIN EU® study

No

Study countries

☐ Spain

Study description

The coronavirus disease 2019 (COVID 19) HIPRA vaccine BIMERVAX® is a recombinant protein-based bivalent variant vaccine intended for use as a booster in individuals 16 years of age and older who have previously received a

messenger RNA (mRNA) COVID 19 vaccine. In March 2023, the European Commission granted marketing authorisation of BIMERVAX® vaccine for use in the European Union. Marketing authorisation applications of BIMERVAX vaccine formulations adapted to other subsequent SARS-CoV-2 variants were submitted to the European Medicines Agencies (EMA) for approval. As of September 2024, approval is pending for the adapted vaccine containing the monovalent JN.1 lineage as the antigen. This study will evaluate the effectiveness of BIMERVAX® as a booster vaccine compared with non-BIMERVAX® booster vaccines using real-world data from European countries.

Study status

Planned

Research institutions and networks

Institutions

RTI Health Solutions (RTI-HS)

- ☐ France
- ☐ Spain
- ☐ Sweden
- ☐ United Kingdom
- ☐ United Kingdom (Northern Ireland)
- ☐ United States

First published: 21/04/2010

Last updated: 13/03/2025

Institution | Not-for-profit | ENCePP partner

Health Services Research and Pharmacoepidemiology Unit (HSRP Unit) FISABIO

Spain

First published: 30/11/2023

Last updated: 30/11/2023

Institution | Other | ENCePP partner

EpiChron Research Group on Chronic Diseases, Aragon Health Sciences Institute (IACS)

Spain

First published: 17/02/2017

Last updated: 02/04/2024

Institution | Educational Institution | ENCePP partner

University Medical Center Utrecht (UMCU)

Netherlands

First published: 24/11/2021

Last updated: 22/02/2024

Institution | Educational Institution | Hospital/Clinic/Other health care facility | ENCePP partner

Fundació Institut Universitari per a la Recerca a l'Atenció Primària de Salut Jordi Gol i Gurina, IDIAPJGol

Spain

First published: 05/10/2012

Last updated: 23/05/2025

Institution | **Educational Institution** | **Laboratory/Research/Testing facility** | **Not-for-profit** | **ENCePP partner**

Agenzia regionale di sanità della Toscana (ARS Toscana)

Italy

First published: 01/02/2024

Last updated: 23/03/2026

Institution | **EU Institution/Body/Agency** | **ENCePP partner**

Networks

Vaccine monitoring Collaboration for Europe (VAC4EU)

Belgium

- [ ] Denmark
- [ ] Finland
- [ ] France
- [ ] Germany
- [ ] Italy
- [ ] Netherlands
- [ ] Norway
- [ ] Spain
- [ ] United Kingdom

First published: 22/09/2020

Last updated: 22/09/2020

Network Outdated ENCePP partner

Contact details

Study institution contact

J. Bradley Layton jblayton@rti.org

Study contact

jblayton@rti.org

Primary lead investigator

J. Bradley Layton 0000-0003-0994-5820

Primary lead investigator

ORCID number:

0000-0003-0994-5820

Study timelines

Date when funding contract was signed
Planned: 31/10/2024

Actual: 17/09/2025

Study start date
Planned: 31/07/2026

Data analysis start date
Planned: 01/09/2026

Date of interim report, if expected
Planned: 31/07/2027

Date of final study report
Planned: 31/07/2029

Sources of funding

- Pharmaceutical company and other private sector

More details on funding

HIPRA Human Health S.L.U.

Study protocol

Protocol_PAES_6578_HIPRA_BIMERVAX_v1.1_19Feb2024_Redacted.pdf (1.71 MB)

Protocol_PAES_6578_HIPRA_BIMERVAX_v3.0_Final_31Oct2025_Redacted.pdf (1.04 MB)

Protocol_PAES_6578_HIPRA_BIMERVAX_v2.0_12March2025_redacted.pdf (1.01 MB)

Regulatory

Was the study required by a regulatory body?

Yes

Is the study required by a Risk Management Plan (RMP)?

EU RMP category 3 (required)

Methodological aspects

Study type

Study type list

Study topic:

Human medicinal product

Study type:

Non-interventional study

Scope of the study:

Effectiveness study (incl. comparative)

Data collection methods:

Secondary use of data

Study design:

A cohort design will be used to estimate the effectiveness of BIMERVAX® on COVID 19–related outcomes compared with other COVID 19 booster vaccines.

Main study objective:

Overall research question: What is the relative effectiveness of receiving BIMERVAX® as a booster vaccine on COVID 19–related outcomes compared with receipt of another authorised COVID 19 vaccine as a booster?

Objectives:

The primary objective is to estimate the effect of BIMERVAX® on the following COVID 19–related outcome compared with other COVID 19 vaccines authorised for the booster indication:

Primary outcome: COVID 19–requiring a hospitalisation or emergency department (ED) visit

The secondary objective is to estimate the effect of BIMERVAX® on the following COVID 19–related outcome compared with other COVID 19 vaccines authorised for the booster indication:

Secondary outcome: COVID 19 diagnosis in any setting

Study Design

Non-interventional study design

Cohort

Study drug and medical condition

Medicinal product name

BIMERVAX

Study drug International non-proprietary name (INN) or common name

COVID-19 VACCINE (RECOMBINANT, ADJUVANTED)

Anatomical Therapeutic Chemical (ATC) code

(J07BN04) covid-19, protein subunit

covid-19, protein subunit

Medical condition to be studied

COVID-19

Population studied

Short description of the study population

The eligible population will be all individuals who have received a booster dose of BIMERVAX® or a comparator COVID 19 vaccine and are actively enrolled in one of the selected European health data sources for at least 12 months before receipt of the booster vaccination. The study period will be from the date of availability of BIMERVAX® vaccine in each participant country to 2 to 3 years past that date, pending the timing and potential seasonality of booster administration campaigns.

Age groups

- Adolescents (12 to < 18 years)
- **Adult and elderly population (≥18 years)**
  - Adults (18 to < 65 years)

        - Adults (18 to < 46 years)
        - Adults (46 to < 65 years)
    - Elderly (≥ 65 years)
        - Adults (65 to < 75 years)
        - Adults (75 to < 85 years)
        - Adults (85 years and over)

Special population of interest

Frail population

Immunocompromised

Pregnant women

Study design details

Setting

The population studied is that described in section 13. The eligible population will be all individuals who have received a booster dose of BIMERVAX® or a comparator COVID 19 vaccine and are actively enrolled in one of the selected European health data sources for at least 12 months before receipt of the booster vaccination. The study period will be from the date of availability of BIMERVAX® vaccine in each participant country to 2 to 3 years past that date, pending the timing and potential seasonality of booster administration campaigns.

Comparators

Other COVID 19 vaccines with the same booster indication.

Outcomes

The primary COVID 19–related outcome evaluated by this study will be as follows:
• COVID 19 requiring a hospitalisation or an ED visit, defined as a diagnosis of COVID 19 leading to a hospital admission or an ED visit

In addition to the primary hospital/ED–based definition, the following broader secondary outcome will also be evaluated.
• COVID 19 diagnosis, defined as a medical diagnosis of COVID 19 occurring in any healthcare encounter: in a hospital, an ED, or an outpatient setting

---

Data analysis plan
The cohort study will estimate the risk of COVID 19 related outcomes in individuals receiving BIMERVAX® compared with individuals receiving a contemporary COVID 19 vaccine also authorised for booster indication. The data analysis will be characterised by the following:
• Baseline will be defined as the date on which eligible individuals receive the booster vaccine (BIMERVAX® or a comparator vaccine). Follow-up starts and eligibility criteria are applied at baseline.
Eligible vaccinated individuals will be followed from baseline until the occurrence of a COVID-19–related outcome, death, disenrolment from the data source, or end of the study period, whichever occurs first.
• The study will estimate the effect of receiving 1 dose of BIMERVAX® as a booster vaccine versus the effect of receiving 1 booster dose of other COVID 19 vaccines. Standard epidemiological methods will be used to achieve baseline exchangeability conditional on the measured confounders.
• Outcomes will be treated as time-to-event variables and will be analysed accordingly. Effect estimates will be provided in both relative (e.g., risk ratio) and absolute (e.g., risk differences) scales. Relative vaccine effectiveness will be estimated as 1 minus the risk ratio.

Data management

ENCePP Seal

The use of the ENCePP Seal has been discontinued since February 2025. The ENCePP Seal fields are retained in the display mode for transparency but are no longer maintained.

Conflicts of interest of investigators

01_DeclarationofInterests-Annex5 - signed.pdf (222.59 KB)

Composition of steering group and observers

02_ENCePPCoCSteeringGroup.pdf (43.37 KB)

Signed code of conduct

03_ENCePPCoCAnnex3_DeclarationofcompliancewiththeENCePPCodeofConduct - signed.pdf (161.23 KB)

Signed code of conduct checklist

04_ENCePPCoCAnnex2_ChecklistofCodeofConduct - signed.pdf (307.26 KB)

Signed checklist for study protocols

05_ENCePPChecklistforStudyProtocol - signed.pdf (515.48 KB)

Data sources

Data source(s)

The Information System for Research in Primary Care (SIDIAP)

The Valencia Health System Integrated Database

EpiChron Cohort

Data sources (types)

Administrative healthcare records (e.g., claims)

Electronic healthcare records (EHR)

Population registry

Use of a Common Data Model (CDM)

CDM mapping

Yes

CDM Mappings

CDM name

ConcepTION CDM

CDM website

https://www.imi-conception.eu/

CDM release frequency

6 months

Data quality specifications

Check conformance

Unknown

Check completeness

Unknown

Check stability

Unknown

Check logical consistency

Unknown

Data characterisation

Data characterisation conducted

Unknown