

# A study of VAC85135, a neoantigen vaccine regimen, concurrently administered with ipilimumab for the treatment of myeloproliferative neoplasms

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| <b>Submission date</b><br>17/02/2023   | <b>Recruitment status</b><br>No longer recruiting | <input type="checkbox"/> Prospectively registered<br><input type="checkbox"/> Protocol                                  |
| <b>Registration date</b><br>28/02/2023 | <b>Overall study status</b><br>Ongoing            | <input type="checkbox"/> Statistical analysis plan<br><input type="checkbox"/> Results                                  |
| <b>Last Edited</b><br>07/03/2025       | <b>Condition category</b><br>Cancer               | <input type="checkbox"/> Individual participant data<br><input checked="" type="checkbox"/> Record updated in last year |

## Plain English summary of protocol

### Background and study aims

Myeloproliferative neoplasms (MPNs) are a group of blood cancers in which the bone marrow makes too many red/white blood cells or platelets or develops scarring that prevents the production of normal cells. MPNs are rare, and the most common types are essential thrombocythemia (ET), polycythemia vera (PV), and primary myelofibrosis (PMF). Due to limited treatment options available, new effective therapies are needed. One approach is a vaccine to train the immune system to reduce the growth of cancer cells and improve the quality of life of patients with these diseases. VAC85135 is a combination vaccine, with two distinct forms, that uses two different viruses carrying genetic material encoding protein fragments only expressed in cancer cells. The goal of the vaccine is to train the immune system to attack the cancer cells that express these abnormal proteins. The study is designed to see if VAC85135 can be safely administered to adult participants with MPNs in combination with ipilimumab.

### Who can participate?

Adult patients aged 18 years and over with MPNs

### What does the study involve?

This is the first study of VAC85135 in humans. It involves a screening period ( $\leq 30$  days before treatment) followed by a treatment period ( $\leq 30$  days after the last dose of VAC85135).

The treatment period consists of 2 parts:

Part 1 (Dose Escalation): All participants receive the same dose of VAC85135, and different dose levels of ipilimumab will be tested. The different ipilimumab doses are tested to study the safety of each dose.

Part 2 (Dose Expansion): Participants will receive VAC85135 at the same dose in addition to the dose of ipilimumab determined during Part 1.

After discontinuation of treatment, participants will be monitored for up to 12 weeks.

During the study, some tests will be performed including blood tests, vital signs, bone marrow tests, ECOG, and pregnancy tests. Blood samples will be taken at multiple timepoints to understand how the body responds to treatment. All side effects will be recorded till the study ends (1 year and 5 months).

What are the possible benefits and risks of participating?

Participants may not receive any benefit from taking part in this study, but the information that is learned from the study may help develop treatments for people with MPNs in the future. This is a first-in-human study which means that VAC85135 has not been given to people before. The possible risks for VAC85135, based on how the drug works and results from laboratory studies are listed below:

- Allergic reactions
- Syncope (loss of consciousness due to insufficient blood flow to the brain)
- Injection site reactions
- Immune-mediated adverse reactions
- Thrombosis with thrombocytopenia (blood clots with low platelets count)
- Guillain-Barré syndrome (the body's immune system attacks nerves)

The participant information sheet and informed consent form, which will be signed by every participant agreeing to take part in the study, includes a detailed section outlining the risks of participating in the study. Participants may have none, some, or all of the possible side effects listed, and they may be mild, moderate, or severe. To minimise the risk associated with taking part, participants are frequently reviewed for any side effects and other medical events. If they have any side effects or are worried about them, or have any new or unusual symptoms, participants will be encouraged to talk with their study doctor. The study doctor will also be looking out for side effects and will provide appropriate medical care. There may also be side effects that the researchers do not expect or do not know about and that may be serious. Many side effects go away shortly after the intervention ends. However, sometimes side effects can be serious, long-lasting, or permanent. If a severe side effect or reaction occurs, the study doctor may need to stop the procedure. The study doctor will discuss the best way of managing any side effects with participants. There is always a chance that an unexpected or serious side effect may happen. This can happen to people who take this or any other drug.

Where is the study run from?

The study is run across multiple medical facilities located in the United Kingdom, France, Canada, the United States of America and Spain.

When is the study starting and how long is it expected to run for?

May 2022 to February 2026

Who is funding the study?

Janssen Research & Development, LLC (Belgium)

Who is the main contact?

Ms Florence Baluwa, Janssen Research and Development, [JanssenUKRegistryQueries@its.jnj.com](mailto:JanssenUKRegistryQueries@its.jnj.com) (UK)

## Contact information

Type(s)

Public

**Contact name**

Ms Florence Baluwa

**Contact details**

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HP12 4DP  
None provided  
JanssenUKRegistryQueries@its.jnj.com

**Type(s)**

Scientific

**Contact name**

Dr Medical Information and Product Information Enquiry

**Contact details**

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Janssen Research and Development  
50-100 Holmers Farm Way  
High Wycombe, Buckinghamshire  
United Kingdom  
HP12 4DP  
+44 (0)800 731 8540, (0)1494 567 444  
Medinfo@its.jnj.com

**Type(s)**

Principal Investigator

**Contact name**

Prof Claire Harrison

**Contact details**

Guys St Thomas NHS Foundation Trust  
London  
United Kingdom  
None provided

**Additional identifiers****EudraCT/CTIS number**

2021-006033-20

**IRAS number**

1005965

**ClinicalTrials.gov number**

NCT05444530

### **Secondary identifying numbers**

VAC85135MPN1001, IRAS 1005965, CPMS 53963

## **Study information**

### **Scientific Title**

A phase I study of VAC85135, a neoantigen vaccine regimen, concurrently administered with ipilimumab for the treatment of myeloproliferative neoplasms

### **Study objectives**

To evaluate the safety of VAC85135 administered with ipilimumab for the treatment of MPNs.  
To evaluate the immunogenicity of VAC85135 administered with ipilimumab for the treatment of MPNs  
To evaluate preliminary anti-tumor clinical activity of VAC85135 administered with ipilimumab for the treatment of MPNs

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

Approved 30/01/2023, South Central - Oxford A Research Ethics Committee (Ground Floor, Temple Quay House, 2 The Square, Bristol, BS1 6PN, UK; +44 (0)207 1048171, (0)207 1048206, (0)207 1048276; oxforda.rec@hra.nhs.uk), ref: 22/SC/0427

### **Study design**

Interventional phase I sequential-assignment no-masking non-randomized study

### **Primary study design**

Interventional

### **Secondary study design**

Non randomised study

### **Study setting(s)**

Hospital

### **Study type(s)**

Treatment

### **Participant information sheet**

Not available in web format, please use contact details to request a participant information sheet

### **Health condition(s) or problem(s) studied**

Myeloproliferative neoplasms

### **Interventions**

Part 1: Dose Escalation; Participants with essential thrombocythemia (ET) and myelofibrosis (MF) will receive VAC85135 target dose intramuscular (IM) injection in the safety lead-in cohort (Cohort 0). Participants in subsequent cohorts will receive VAC85135 target dose IM injection along with ipilimumab intravenous (IV) infusion. Ipilimumab dose may be escalated based on dose

Part 2: Dose Expansion; Participants with polycythemia vera (PV) or post-polycythemia vera myelofibrosis, ET and MF will receive VAC85135 target dose IM injection with ipilimumab IV infusion at the dose(s) determined by study evaluation team (SET).

### **Intervention Type**

Biological/Vaccine

### **Phase**

Phase I

### **Drug/device/biological/vaccine name(s)**

VAC85135, ipilimumab

### **Primary outcome measure**

Current primary outcome measure as of 16/02/2024:

1. Number of participants with dose-limiting toxicity (DLT), defined as any of the following: high-grade non-hematologic toxicity, or hematologic toxicity, measured according to the National Cancer Institute-Common Terminology Criteria for Adverse Events (NCI-CTCAE) Version 5.0 from Baseline (Day 1) up to Day 78
2. Number of participants with adverse events (AEs) and serious adverse events (SAEs), defined as any untoward medical occurrence in a clinical study participant administered a pharmaceutical product, measured using study patient records up to 79 weeks. AEs will be graded as Grade 1: Mild- asymptomatic or mild symptoms; clinical or diagnostic observations only; intervention not indicated; Grade 2: Moderate- minimal, local or noninvasive intervention indicated; limiting age-appropriate instrumental activities of daily living (ADL); Grade 3: Severe or medically significant but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; limiting self-care activities of daily living; Grade 4- Life-threatening consequences- urgent intervention indicated; Grade 5: Death related to AE.

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2. Number of participants with adverse events (AEs) and serious adverse events (SAEs), defined as any untoward medical occurrence in a clinical study participant administered a pharmaceutical product, measured using study patient records up to 76 weeks. AEs will be graded as Grade 1: Mild- asymptomatic or mild symptoms; clinical or diagnostic observations only; intervention not indicated; Grade 2: Moderate- minimal, local or noninvasive intervention indicated; limiting age-appropriate instrumental activities of daily living (ADL); Grade 3: Severe or medically significant but not immediately life-threatening; hospitalization or prolongation of hospitalization

indicated; disabling; limiting self-care activities of daily living; Grade 4- Life-threatening consequences- urgent intervention indicated; Grade 5: Death related to AE.

## **Secondary outcome measures**

Current secondary outcome measures as of 16/02/2024:

1. Number of participants with antigen-specific T-cell response measured using Elispot up to end of treatment (EOT) (up to 64 weeks)
2. Number of participants with overall response measured by complete remission, partial remission, clinical improvement, anemia response, spleen response, symptoms response, progressive disease, stable disease and relapse as per the revised response criteria by the International Working Group-Myeloproliferative Neoplasms Research and Treatment (IWG-MRT) and European LeukemiaNet (ELN) Consensus Report response criteria for myelofibrosis (MF) up to 79 weeks
3. Number of participants with a disease response measured per Modified IWG-MRT Criteria at weeks 24, 48 and EOT
4. Number of participants with peripheral blood mutant calreticulin (mutCALR) and janus kinase 2 with V617F mutation (JAK2V617F) allele burden measured using peripheral blood sample analysis up to end of treatment (EOT) (Up to 64 weeks)
5. Number of participants with transfusion burden measured using the number of transfusions participants received, each transfusion received will be recorded, up to EOT at 64 weeks
6. Number of participants with patient-reported symptoms on therapy measured using a Total Symptom Score on Patient-reported Outcomes (PROs) questionnaire up to EOT at 64 weeks
7. Time to progression of myeloproliferative neoplasms (MPNs; polycythemiavera [PV], essential thrombocythemia [ET], and primary myelofibrosis [PMF]) measured using the IWG-MRT and ELN consensus report up to EOT at 64 weeks

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## Overall study start date

04/05/2022

## Completion date

02/02/2026

# Eligibility

## Key inclusion criteria

Current inclusion criteria as of 16/02/2024:

1. Be positive for a CALR (calreticulin) mutation: Type 1 or Type 2; Type 1-like, or Type 2-like may be considered with Sponsor approval; or positive for the JAK2V617F (Janus kinase 2 with valine 617 to phenylalanine mutation) mutation with HLA-A02:01 (human leukocyte antigens) per medical history or local testing.
2. Have an Eastern Cooperative Oncology Group (ECOG) performance status grade of 0 or 1 or 2
3. Have the following hematologic laboratory values: Leukocytes greater than or equal to ( $\geq$ )  $1.5 \times 10^9$  per liter, Neutrophils  $\geq 1.0 \times 10^9$  per liter, Platelets  $\geq 20 \times 10^9$  per liter, Hemoglobin greater than ( $>$ ) 7 gram per deciliter (g/dL)
4. Have the following chemistry laboratory values: Alanine aminotransferase (ALT): less than or equal to ( $\leq$ ) 3\*upper limit of normal (ULN), aspartate aminotransferase (AST):  $\leq 3 \times \text{ULN}$ , total bilirubin:  $\leq 1.5 \times \text{ULN}$ , and glomerular filtration rate  $\geq 40$  milliliter per minute (mL/min)
5. A female participant of childbearing potential must agree to all the following during the study and for 6 months after the last dose of study treatment: use a barrier method of contraception, use a highly effective preferably user-independent method of contraception, not donate eggs (ova, oocytes) or freeze for future use for the purposes of assisted reproduction, not plan to become pregnant, not to breast-feed
6. A male participant must agree to all the following during the study and for 90 days after the last dose of study treatment: wear a condom when engaging in any activity that allows for the passage of ejaculate to another person, not to father a child, not to donate sperm or freeze for future use for the purpose of reproduction

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**Participant type(s)**

Patient

**Age group**

Adult

**Sex**

Both

**Target number of participants**

60

**Total final enrolment**

14

**Key exclusion criteria**

Current exclusion criteria as of 16/02/2024:

1. History of any significant medical condition per investigators judgment (example: severe asthma/chronic obstructive pulmonary disease (COPD), poorly regulated heart condition, insulin-dependent diabetes mellitus)
2. Serious known clinically relevant allergies or earlier anaphylactic reactions
3. Currently pregnant or breastfeeding
4. Prior treatment with any Janus kinase 1/2 (JAK 1/2) inhibitor
5. Known sensitivity or contraindications to the use of Ipilimumab per local prescribing information

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3. Currently pregnant or breastfeeding
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5. Known sensitivity or contraindications to the use of Ipilimumab per local prescribing information

**Date of first enrolment**

21/07/2022

**Date of final enrolment**

24/04/2024

**Locations**



**Countries of recruitment**

Canada

France

Spain

United Kingdom

United States of America

**Study participating centre****Guy's and St Thomas' Hospital**

Dept Of Hematology

Great Maze Pond

4th floor

Southwark Wing

London

United Kingdom

SE1 9RT

**Study participating centre****The Christie NHS Foundation Trust**

Wilmslow Road

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**Study participating centre****Churchill Hospital**

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Headington

Oxford

United Kingdom

OX3 7LE

**Study participating centre****University Health Network (UHN) Princess Margaret Cancer Centre**

610 University Avenue

Toronto

Canada

M5G 2C1

**Study participating centre**  
**Hospital Universitario de Salamanca**  
Salamanca  
Spain  
37007

**Study participating centre**  
**Hospital Clinico Universitario De Valencia**  
Av. de Blasco Ibanez  
Valencia  
Spain  
46010

**Study participating centre**  
**City of Hope**  
1500 E Duarte Road  
Duarte  
United States of America  
91010

**Study participating centre**  
**MD Anderson Cancer Centre**  
1515 Holcomber Blvd  
Houston, Texas  
United States of America  
77030

**Study participating centre**  
**Moffitt Cancer Centre**  
12902 USF Magnolia Drive  
Tampa  
Florida  
United States of America  
33612

**Study participating centre**  
**Cleveland Clinic**  
9500 Euclid Ave

Cleveland  
Ohio  
United States of America  
44195

## Sponsor information

### Organisation

Janssen Research & Development, LLC

### Sponsor details

Turnhoutseweg 30  
Beerse  
Belgium  
2340  
+31715242110  
ClinicalTrialsEU@its.jnj.com

### Sponsor type

Industry

### Website

[www.janssen.com](http://www.janssen.com)

## Funder(s)

### Funder type

Industry

### Funder Name

Janssen Research and Development

### Alternative Name(s)

Janssen R&D, Janssen Research & Development, Janssen Research & Development, LLC, Janssen Research & Development LLC, Janssen Pharmaceutical Companies of Johnson & Johnson, Research & Development at Janssen, JRD, J&J PRD

### Funding Body Type

Private sector organisation

### Funding Body Subtype

For-profit companies (industry)

### Location

# Results and Publications

## Publication and dissemination plan

Study results will be available via publication in scientific journals, the EudraCT database and presentation at scientific meetings. Results will be made available to participants via a Plain Language Summary a year after the end of the study. The summary will describe the results regardless of the study outcome in language that is understandable to the general public. It will not contain individual participant results or their personal information. A copy of the Summary will be provided to the REC.

## Intention to publish date

19/08/2025

## Individual participant data (IPD) sharing plan

The data sharing policy of the Janssen Pharmaceutical Companies of Johnson & Johnson is available at [www.janssen.com/clinical-trials/transparency](http://www.janssen.com/clinical-trials/transparency). As noted on this site, requests for access to the study data can be submitted through Yale Open Data Access (YODA) Project site [atyoda.yale.edu](http://atyoda.yale.edu)

## IPD sharing plan summary

Available on request

## Study outputs

| Output type                          | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|--------------------------------------|---------|--------------|------------|----------------|-----------------|
| <a href="#">HRA research summary</a> |         |              | 26/07/2023 | No             | No              |