

# A trial to investigate the effects of multiple doses of JNJ-67484703 in patients with rheumatoid arthritis, ulcerative colitis and Sjögren's syndrome

<b>Submission date</b> 22/07/2022	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 28/09/2022	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 15/04/2025	<b>Condition category</b> Other	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

The aim of the PARIS trial is to understand if JNJ-67484703, also referred to as the trial drug, can alter the numbers of disease-associated immune cells in diseased tissue in patients with rheumatoid arthritis (RA), ulcerative colitis (UC) and Sjögren's syndrome (SjS). This will be done by taking a small amount of diseased tissue before and after a 12-week treatment period with the study drug. The numbers of these immune cells can be measured in the biopsy tissue to understand if they are altered by the trial drug. Patients will be closely monitored to see if they feel better or not on treatment and to look for side effects. For patients with RA, biopsy tissue will be obtained by using an ultrasound machine to guide a needle to take samples of the lining of the joint. For patients with UC, bowel tissue will be taken during a camera test of the bowels. For patients with SjS, a small amount of salivary gland tissue will be obtained by a routine lip biopsy. All these biopsy procedures are performed regularly at the hospitals taking part in the study and will be done by someone with the appropriate training and experience. At the end of the trial, we hope to know if the trial drug acts in the way we expect.

### Who can participate?

The trial is for patients aged between 18-75 years with either RA, UC or SjS who, based on pre-defined inclusion/exclusion criteria, have active disease and are fit enough to receive multiple doses of the trial drug.

### What does the study involve?

All patients will enter a screening period and be assessed using the eligibility criteria. If the patient is eligible, the patient will enter the treatment phase of the trial where they will receive an injection of the trial drug under the skin 7 times over 10 weeks. These injections are injected into the fatty layer just below the skin. 5 patients from each cohort will receive a low dose and 10 will receive a higher dose. After the treatment phase, patients will be followed up at 2 further visits over a 12-week period.

What are the possible benefits and risks of participating?

Patients may not directly benefit from participating in this trial, as the benefit of JNJ-67484703 in patients with RA, UC and SjS is not yet proven. However, by taking part patients will be helping us to see if JNJ-67484703 could be used in the future as a treatment for people with RA, UC and SjS.

Where is the study run from?

University of Birmingham (UK)

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

January 2020 to October 2025

Who is funding the study?

Janssen Research and Development, LLC (USA)

Who is the main contact?

Dr Benjamin Fisher (UK)

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## Contact information

### Type(s)

Public

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Scientific

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## Additional identifiers

**EudraCT/CTIS number**  
2021-005998-13

**IRAS number**  
1004476

**ClinicalTrials.gov number**  
Nil known

**Secondary identifying numbers**  
RG\_21-180, IRAS 1004476, CPMS 53062

## Study information

**Scientific Title**  
Pharmacodynamic activity trial of JNJ-67484703 in rheumatoid arthritis, ulcerative colitis and Sjögren's syndrome (PARIS): a phase II proof of biology trial

**Acronym**  
PARIS

**Study objectives**  
The principal hypothesis of this trial is that treatment with JNJ-67484703 will lead to a dose-dependent alteration in immune cell subsets in disease-relevant tissue.

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**  
Approved 24/05/2022, South Central - Berkshire B Research Ethics Committee (The Old Chapel, Royal Standard Place, Nottingham, NG1 6FS, United Kingdom; +44 (0)207 104 8253; berkshireb.rec@hra.nhs.uk), ref: 22/SC/0128

**Study design**  
Multiple-dose parallel multicentre open-label interventional 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**

Rheumatoid arthritis, ulcerative colitis and Sjögren's syndrome

**Interventions**

Patients will receive the trial drug JNJ-67484703 at either a low (0.5mg/kg) or high (3mg/kg) dose. Each patient will receive the trial drug at weeks 0, 1 and 2 and then every 2 weeks until week 10. The first 5 participants in each disease cohort will be allocated to the 0.5 mg/kg dosing cohort, and subsequent participants will be allocated to the 3 mg/kg regimen, subject to possible modifications.

**Intervention Type**

Drug

**Phase**

Phase II

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

JNJ-67484703

**Primary outcome measure**

The biological effects of multiple doses of JNJ-67484703 in disease-relevant tissues (synovium, gut, salivary gland) over time in participants with RA, UC and SjS, measured using cellular analysis techniques at weeks 0, 12

**Secondary outcome measures**

1. Safety and tolerability measured using NCI-CTCAE criterion Version 5 at weeks 0, 1, 2, 4, 6, 8, 10, 12, 16, and 24
2. Disease-relevant immune cell populations measured using cellular analysis techniques at weeks 0, 6, 12, 24
3. Inflammation in target tissue measured using Krenn scoring (RA), Focus score, mean foci area, the percentage area of infiltration, T/B cell organisation and presence of germinal centre-like structures (SjS), Robarts Histopathology Index (RHI) and Nancy Index at weeks 0 and 12
4. Markers of inflammation in peripheral blood measured using immunoassays at weeks 0, 6, 12, and 24
5. Autoantibody levels measured using immunoassays at weeks 0, 6, 12, and 24
6. Clinical measures of disease activity:
  - 6.1. Overall disease activity in RA as measured by:
    - 6.1.1. Disease Activity Score 28 using C-reactive protein (DAS28-CRP) at weeks 0, 6, 12, and 24

- 6.1.2. Physician global visual analogue scale (VAS) weeks 0, 6, 12, and 24
- 6.1.3 Response to treatment in RA as measured by:
  - 6.1.3.1. European Alliance of Associations for Rheumatology (EULAR) response weeks 0, 6, 12, and 24
  - 6.1.3.2. Proportion of participants in DAS28-CRP remission ( $<2.6$ ) and low disease activity ( $\leq 3.2$ ) states weeks 0, 6, 12, and 24
- 6.2. Overall disease activity in SjS as measured by:
  - 6.2.1. Physician global VAS at weeks 0, 6, 12, and 24
  - 6.2.2. Response to treatment in SjS as measured by Composite of Relevant Endpoints for SjS (CRESS) responders (ultrasound excluded)
  - 6.2.3. Salivary flow in SjS as measured by Unstimulated salivary flow (ml/min; assuming  $1g \approx 1ml$ ) at weeks 0, 6, 12, 24
  - 6.2.4. Stimulated salivary flow (ml/min; assuming  $1g \approx 1ml$ ) at weeks 0, 6, 12, 24
  - 6.2.5. Ocular involvement in SjS as measured by Schirmer's test (mm) at weeks 0, 12
- 6.3. Overall disease activity in UC as measured by:
  - 6.3.1. Mayo clinic score (MCS) at weeks 0, 12
  - 6.3.2. Partial Mayo Clinic Score at weeks 0, 2, 4, 6, 8, 10, 16, 24
  - 6.3.3. Simple Clinical Colitis Activity Index (SCCAI) at weeks 0, 2, 4, 6, 8, 10, 12, 16, 24
  - 6.3.4. Response to treatment in UC as measured by:
    - 6.3.4.1. Endoscopic healing (Ulcerative Colitis Endoscopic Index of Severity [UCEIS]  $<1$  and Mayo Endoscopic Score [MES]  $<1$ ) at weeks 0, 12
    - 6.3.4.2. Clinical remission (rectal bleeding [RB]=0 and stool frequency [SF]=0) at weeks 0, 12
    - 6.3.4.3. Clinical response (30% decline in MCS and RB=0 and SF  $<1$  and MES  $<1$ ) at weeks 0, 12
    - 6.3.4.4. Change detected by artificial intelligence reading of endoscopy videos (Satisfai system) at weeks 0, 12
- 7. Participant-reported outcomes measured using:
  - 7.1. Health-related Quality of Life as measured by EQ-5D-5L at weeks 0, 6, 12, and 24
  - 7.2. Fatigue as measured by FACIT-Fatigue at weeks 0, 6, 12, and 24
  - 7.3. Patient assessment of overall disease activity as measured by Patient Global Disease Activity VAS at weeks 0, 6, 12, and 24
  - 7.4. Pain in RA as measured by pain VAS at weeks 0, 2, 4, 6, 8, 10, 12, 16, and 24
  - 7.5. Physical function in RA as measured by:
    - 7.5.1. Physical function as assessed by HAQ-DI at weeks 0, 6, 12, and 24
    - 7.5.2. Symptom burden in SjS as measured by EULAR SjS patient Reported index (ESSPRI) at weeks -6, 0, 2, 4, 6, 8, 10, 12, 16, and 24
  - 7.6. Symptom burden in UC as measured by:
    - 7.6.1. Inflammatory Bowel Disease Questionnaire (IBDQ) at weeks 0, 4, 8, and 12
    - 7.6.2. IBD Control at weeks 0, 2, 4, 6, 8, 10, 12, 16, and 24

## Overall study start date

01/01/2020

## Completion date

31/10/2025

## Eligibility

## **Key inclusion criteria**

Main inclusion criteria for all cohorts:

1. Informed consent must be obtained provided prior to any trial-related procedures being performed
2. Male and female participants aged  $\geq 18$  and  $\leq 75$  years at the time of enrolment
3. Able to communicate well with the investigator, and to understand and comply with the requirements of the trial
4. Willing to have repeat tissue biopsy relevant to disease group (ultrasound-guided synovial biopsy, minor salivary gland biopsy or endoscopic colonic mucosal biopsy)
5. Body weight within the range of 45.0 kg to 120.0 kg, inclusive

Inclusion criteria for patients with rheumatoid arthritis (RA):

6. Confirmed clinical diagnosis of RA
7. Active RA
8. Joint amenable to biopsy by ultrasound criteria
9. Autoantibody positive
10. Have methotrexate (MTX) inadequate response
11. If using regular non-steroidal anti-inflammatory drugs (NSAIDs) must be on a stable dose

Inclusion criteria for patients with ulcerative colitis (UC):

12. Confirmed clinical diagnosis of UC
13. Moderately to severely active UC on endoscopy
15. Either primary non-response or secondary loss of response to one or more biologic or targeted synthetic therapies
16. Medications/therapies must have been discontinued by the number of stated weeks before Visit 2 (Baseline) as outlined in the protocol.
17. A participant  $\geq 45$  years of age must have had a full colonoscopy. Adenomatous polyps must be removed before the first dose of trial intervention
18. A participant who has had extensive colitis for  $\geq 8$  years, or disease limited to the left side of the colon for  $\geq 10$  years, must have or have had a full colonoscopy to assess for the presence of dysplasia or malignancy at the Screening Visit

Inclusion criteria for patients with Sjögren's syndrome (SjS):

19. A diagnosis of SjS, according to the 2016 American College of Rheumatology (ACR)/European League Against Rheumatism (EULAR) classification criteria
20. Autoantibody positive
21. At least "low activity" in the biological domain of EULAR Sjögren's syndrome (SS) disease activity index (ESSDAI)
22. ESSPRI component scores as outlined in the protocol
23. Residual stimulated whole salivary flow

## **Participant type(s)**

Patient

## **Age group**

Adult

## **Lower age limit**

18 Years

## **Upper age limit**

75 Years

**Sex**

Both

**Target number of participants**

45

**Key exclusion criteria**

Main exclusion criteria for all cohorts:

1. Prior B cell depletion
2. Other biologic therapy or targeted synthetic disease-modifying antirheumatic drugs (DMARDs)
3. Receipt of any investigational medicinal product within 16 weeks, or approximately 5 half-lives (whichever is longer) prior to Visit 2 (baseline)
4. Any active or ongoing viral, bacterial or other infections
5. Confirmed, suspected, or close contact with a person with known or suspected SARS-CoV-2 infection
6. Major organ, haematopoietic stem cell or bone marrow transplant
7. Any cancer within the previous 5 years,
8. Severe, uncontrolled fibromyalgia symptoms.
9. Treatment with glucocorticoids unless on a stable dose of prednisolone
10. Positive test for HIV, Hepatitis C Virus or Hepatitis B Virus
11. Active cytomegalovirus (CMV) or Epstein–Barr virus (EBV)
12. Live vaccine within 12 weeks of registration
13. Bacillus Calmette-Guérin (BCG) vaccination within 12 months prior to trial drug administration.
14. Evidence of active or latent tuberculosis (TB)
15. Has known allergies, hypersensitivity, or intolerance to JNJ-67484703 or its excipients
16. Any medical, surgical or psychiatric condition that the investigator believes may jeopardise the participant, or the validity of the trial results, were they to participate in the trial
17. Has experienced myocardial infarction, unstable ischaemic heart disease, or stroke within 12 weeks of Screening Visit
18. Female who is pregnant, breastfeeding, intends to become pregnant or is of childbearing potential, not willing to use highly effective contraceptive methods
19. A non-vasectomised male participant who refuses to wear a condom during the trial and for 14 weeks after the last dose of trial treatment when engaging in any activity that allows for passage of ejaculate to another person. An additional method of highly effective method of contraception must also be used.
20. A male participant must agree not to donate sperm for the purpose of reproduction during the trial and for a minimum 14 weeks after receiving the last dose of the trial intervention
21. Screening laboratory test results as specified in the protocol
22. Advised by clinician not to have a tissue biopsy due to clinical reasons or anti-coagulant use
23. Septic arthritis of a native or prosthetic joint in the last 12 months (or indefinitely if the prosthetic joint remains in situ)

Exclusion criteria for patients with rheumatoid arthritis:

24. History of or current inflammatory joint disease other than RA
25. Currently taking anticoagulant medications (not anti-platelet agents) that would contraindicate synovial biopsy
26. DMARD or other immunosuppressive therapy with the exception of methotrexate, sulfasalazine or hydroxychloroquine at stable doses

Exclusion criteria for patients with ulcerative colitis:

- 27. History of severe extensive colitis
- 28. Has UC limited to the rectum only
- 29. Presence or history of a fistula
- 30. History of colonic mucosal dysplasia.
- 31. Presence on screening endoscopy of adenomatous colonic polyps, if not removed before trial entry, or history of adenomatous colonic polyps that were not removed
- 32. Diagnosis of indeterminate colitis, microscopic colitis, ischemic colitis, or Crohn's disease or clinical findings suggestive of Crohn's disease

Exclusion criteria for patients with Sjögren's syndrome:

- 33. Diagnosis of any other non-SjS sicca syndrome
- 34. DMARD or other immunosuppressive therapy with the exception of methotrexate, sulfasalazine, hydroxychloroquine, leflunomide or azathioprine
- 35. Regular use of medications known to cause dry eyes or mouth as a common side effect
- 36. Topical ocular prescription medications other than artificial tears and lubricating gels
- 37. Has SjS overlap syndromes where another confirmed autoimmune rheumatic or systemic inflammatory condition is the primary diagnosis
- 38. Certain eye surgeries:
  - 38.1. Has had cataract surgery prior to dosing and new installation of lacrimal punctal plugs prior to dosing
  - 38.2. Has had a full-thickness corneal transplantation (penetrating keratoplasty); however, participants who have had endothelial keratoplasty are not excluded

**Date of first enrolment**

30/09/2022

**Date of final enrolment**

15/06/2023

## **Locations**

**Countries of recruitment**

England

United Kingdom

**Study participating centre**

**University Hospitals Birmingham NHS Foundation Trust**

Queen Elizabeth Hospital

Mindelsohn Way

Edgbaston

Birmingham

United Kingdom

B15 2GW

**Study participating centre**



**Oxford Radcliffe Hospital NHS Trust**

The John Radcliffe  
Headley Way  
Headington  
Oxford  
United Kingdom  
OX3 9DU

**Study participating centre****The Freeman Group of Hospitals NHS Trust**

Freeman Hospital  
Freeman Road  
High Heaton  
Newcastle upon Tyne  
United Kingdom  
NE7 7DN

**Study participating centre****Guys and St Thomas Hospital**

Great Maze Pond  
London  
United Kingdom  
SE1 9RT

**Study participating centre****Royal London Hospital**

4 Newark Street  
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United Kingdom  
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## **Sponsor information**

**Organisation**

University of Birmingham

**Sponsor details**

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**Sponsor type**

University/education

**Website**

<https://www.birmingham.ac.uk/index.aspx>

**ROR**

<https://ror.org/03angcq70>

## **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**

United States of America

## **Results and Publications**

**Publication and dissemination plan**

Planned publication in a high-impact peer-reviewed journal

**Intention to publish date**

31/03/2025

## Individual participant data (IPD) sharing plan

The data-sharing plans for the current study are unknown and will be made available at a later date

## IPD sharing plan summary

Data sharing statement to be made available at a later date

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">HRA research summary</a>			28/06/2023	No	No