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Understanding how glandular fever affects the immune system and whether antiviral treatment changes the body's response to infection

Submission date
19/11/2026

Recruitment status
Not yet recruiting

Registration date
25/11/2026

Overall study status
Ongoing

Last Edited
23/11/2026

Condition category
Infections and Infestations

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
Epstein-Barr virus (EBV) is a very common virus that infects most people at some point in their lives. Many people have no symptoms, but some develop infectious mononucleosis (IM), also known as glandular fever. IM can cause symptoms such as a severe sore throat, fever, swollen glands and long-lasting tiredness. Previous research suggests that people who have had IM may be more likely to develop certain autoimmune diseases later in life, including multiple sclerosis. This study aims to understand why some people develop IM while others do not, and how EBV affects the immune system. The researchers will compare people with IM, people with bacterial throat infections caused by streptococcal bacteria, and healthy volunteers. The study will also investigate whether a short course of the antiviral medicine famciclovir can affect the amount of EBV in the body and change the immune response in people with IM.

Who can participate?
People aged 16 to 35 years can take part if they have IM, a streptococcal throat infection, or are healthy volunteers. Participants must be able to give informed consent and meet the study eligibility criteria.

What does the study involve?
The study plans to recruit 80 participants.
Sixty participants will take part in an observational study:
1. 20 participants with IM
2. 20 participants with streptococcal throat infection
3. 20 healthy volunteers
A further 20 participants with IM will be offered treatment with famciclovir taken by mouth twice a day for 7 days.
Participants will provide blood samples, saliva samples and throat swabs when they join the

study. They will then attend follow-up visits and provide further samples after 7 days, 28 days, 183 days, 365 days and 730 days. These samples will be used to measure EBV levels and to study how the immune system responds to infection over time.

What are the possible benefits and risks of participating?
Participants may not receive any direct health benefit from taking part. However, the information collected could help researchers better understand how EBV causes IM and affects the immune system. The findings may support the development of future treatments and management strategies for EBV-related illnesses, including diseases linked to abnormal immune responses.
The study involves blood sampling, throat swabs and saliva collection, which may cause temporary discomfort. Participants receiving famciclovir may experience side effects associated with this medicine. The study team will explain the potential risks and side effects before participants decide whether to take part.

Where is the study run from?
The study is run from Barts Health NHS Trust at The Royal London Hospital in London, United Kingdom.

When is the study starting and how long is it expected to run for?
January 2027 to January 2030.

Who is funding the study?
The study is funded by the Horne Family Foundation, United States of America.

Who is the main contact?
Dr Ben Bloom, ben.bloom@nhs.net

Contact information

Type(s)
Principal investigator, Scientific, Public

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Study information

Scientific Title
Epstein Barr virus viral loads, memory B-cells repertoires, and immune response in people with and without a history of infectious mononucleosis

Acronym
EB-MEMs

Study objectives
1. To compare deep immunophenotyping and EBV viral loads between subjects with infectious mononucleosis (IM), subjects with antibiotic-treated streptococcal pharyngitis, and healthy subjects who are either EBV-seronegative or EBV-seropositive following asymptomatic EBV exposure in the past
2. To explore the effects of oral famciclovir (500 mg twice daily for 7 days) on EBV viral load, viral shedding and immunological biomarkers, including the B-cell repertoire and immune function, in participants with IM

Ethics approval required
Ethics approval required

Ethics approval(s)
Submitted 01/10/2026, Joint Research Management Office (Barts Health NHS Trust & Queen Mary University of London, London, E1 4UJ, United Kingdom; +44 20 7882 7275/6574; research.governance@qmul.ac.uk), ref: 367726

Primary study design
Interventional

Allocation
Non-randomized controlled trial

Masking
Open (masking not used)

Control
Active

Assignment
Parallel

Purpose
Treatment

Study type(s)

Health condition(s) or problem(s) studied
Epstein Barr virus

Interventions

Cohort 1 (Observational Cohort):
Sixty participants will be recruited into three observational (no intervention introduced) groups:
(1) 20 participants with confirmed infectious mononucleosis (IM),
(2) 20 participants with confirmed streptococcal pharyngitis, and
(3) 20 healthy volunteers. Participants in these groups will not receive famciclovir. All participants will undergo baseline assessment and collection of blood, saliva and throat swab samples, followed by follow-up assessments at Day 7, Day 28, Month 6, Month 12 and Month 24.

Cohort 2 (Intervention Cohort):
Twenty participants with confirmed infectious mononucleosis will be recruited after completion of recruitment to Cohort 1. Participants will receive oral famciclovir 500 mg twice daily for 7 days. Blood, saliva and throat swab samples will be collected at baseline, Day 7, Day 28, Month 6, Month 12 and Month 24. The study will evaluate the effects of famciclovir on EBV viral load, viral shedding and immunological biomarkers.

Duration of Treatment and Follow-up:
Participants in the intervention cohort will receive famciclovir for 7 days. Participants in all study arms will be followed for 24 months after enrolment, with assessments conducted at Day 7, Day 28, Month 6, Month 12 and Month 24.

Randomisation:
No randomisation will be undertaken. This is a non-randomised, sequential cohort study. Participants will be allocated to study groups according to their clinical diagnosis and eligibility criteria. Recruitment to the famciclovir intervention cohort will commence only after recruitment to the observational cohort has been completed.

Intervention Type
Drug/Device

Phase
Not Applicable

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

Primary outcome(s)
1. EBV viral loads, viral shedding, immunological biomarkers, B-cell repertoire and immune function measured using laboratory analysis of blood, saliva samples and throat swabs at first contact, day 7, day 28, day 183, day 365, and day 730

Key secondary outcome(s)

Completion date
04/01/2030

Eligibility

Key inclusion criteria
1. Age above 16 years
2. Diagnosis of IM (Intervention and control group)
3. Diagnosis of streptococcal pharyngitis (control group)

4. Ability to provide Informed consent
5. Willingness to take a course of oral famciclovir (Intervention group)

Healthy volunteers allowed
Yes

Age group
Mixed

Lower age limit
16 Years

Upper age limit
35 Years

Sex
All

Total final enrolment
80

Key exclusion criteria
1. Unable to comply with study requirements
2. Unable to provide informed consent
3. Other pre-existing autoimmune diseases, for example, type I diabetes mellitus, autoimmune thyroid disease, inflammatory bowel disease, psoriasis, etc.
4. Unwilling to take a 7-day course of famciclovir (Intervention group)
5. Concomitant treatment with probenicid and raloxifene (Intervention group)
6. Pregnant or breastfeeding (Intervention group)

Date of first enrolment
05/01/2027

Date of final enrolment
04/01/2028

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Barts Health NHS Trust
The Royal London Hospital
80 Newark Street

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Sponsor information

Organisation
Queen Mary University of London

ROR
https://ror.org/026zzn846

Funder(s)

Funder type

Funder Name
Horne Family Foundation

Alternative Name(s)

Funding Body Type
Private sector organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
United States of America

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol file		20/11/2026	20/11/2026	No	No