

# Gene therapy for Tay-Sachs and related diseases

<b>Submission date</b> 12/09/2010	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered
<b>Registration date</b> 06/10/2010	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 25/06/2020	<b>Condition category</b> Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

Not provided at time of registration

## Contact information

### Type(s)

Scientific

### Contact name

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### Contact details

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## Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers

HGM201

# Study information

## Scientific Title

Phase I/II open-label trial to determine the safety and tolerability of intracranial gene therapy in GM2 gangliosidosis using recombinant adeno-associated viral vectors

## Acronym

SAVVY CHILD

## Study objectives

Intracerebral and intraventricular rAAV vectors will safely deliver potentially therapeutic hexosaminidase A and B isozymes in patients with GM2 gangliosidosis.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Not provided at time of registration

## Study design

Single-centre open-label interventional trial

## 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 the contact details to request a patient information sheet

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

Tay-Sachs disease, Sandhoff disease

## Interventions

Single interventional event: neurosurgical delivery of monocistronic rAAV vectors harbouring  $\alpha$  and  $\beta$  human hexosaminidase transgenes by intracranial injection, depositing at 12 sites with supplementary infusion into cerebrospinal fluid spaces ~ $10^{12}$  genome copies per locus delivered within 36 h. No placebo or interventional control group is possible.

At recruitment: intensive rapid neurological, motor development and neuropsychological evaluation with sample collection and banking.

Follow-up: safety and tolerance: clinical examination twice daily for 7 days after procedure, weekly for 1 month then every month for 6 months; every 2 months thereafter for 2 years to exclude signs of haemorrhage, systemic infection, immune reactions and encephalitis. CSF testing will be conducted as appropriate but pre-procedure and within 2 weeks of vector administration; thereafter at intervals alongside MRI (including DTwi and MR spectroscopy), to exclude leukoencephalopathy and incidental lesions before procedure and at day 7; further studies at 3, 6 12 and 24 months to evaluate necrosis and cortical conformation and thickness afterwards. Six monthly neuro-developmental (if relevant) and neuropsychological testing.

The total duration of the study will be 3 years.

### **Intervention Type**

Other

### **Phase**

Not Applicable

### **Primary outcome measure**

No acute or sub-acute events causing deterioration in neurological function or impaired structural integrity of central nervous system.

### **Secondary outcome measures**

Secondary end-point criteria on which phase III efficacy studies will be predicated, will compare outcomes in siblings with disease in affected pedigrees with Tay-Sachs and related diseases, as well as population data on the natural course of GM2 gangliosidosis. Procedures include banking of biological samples and interval neuropsychological evaluation.

### **Overall study start date**

01/03/2012

### **Completion date**

28/02/2015

## **Eligibility**

### **Key inclusion criteria**

1. Male and female infants and young subjects aged 3 months to 18 years
2. GM2 gangliosidosis confirmed by biochemical analysis and molecular analysis of cognate HEXA or HEXB genes in the presymptomatic phase with normal neuromotor development, physical examination and cerebral MR imaging

### **Participant type(s)**

Patient

### **Age group**

Child

### **Lower age limit**

3 Months

**Upper age limit**

18 Years

**Sex**

Both

**Target number of participants**

12

**Key exclusion criteria**

1. GM2 activator deficiency
2. Developmental regression or other features of symptomatic GM2 gangliosidosis
3. Clinical or radiological abnormalities of the central nervous system

**Date of first enrolment**

01/03/2012

**Date of final enrolment**

28/02/2015

**Locations****Countries of recruitment**

Cyprus

Czech Republic

England

France

Germany

Greece

Israel

Italy

Netherlands

Poland

Portugal

Türkiye

United Kingdom

**Study participating centre**  
**University of Cambridge**  
Cambridge  
United Kingdom  
CB2 0QQ

## **Sponsor information**

### **Organisation**

Cambridge University Hospitals NHS Foundation Trust (UK)

### **Sponsor details**

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### **Sponsor type**

Hospital/treatment centre

### **Website**

<http://www.cambridge-biomedical.co.uk/science>

### **ROR**

<https://ror.org/04v54gj93>

## **Funder(s)**

### **Funder type**

Government

### **Funder Name**

Medical Research Council, Grant Ref: MR/K025570/1DPFS/DCS

### **Alternative Name(s)**

Medical Research Council (United Kingdom), UK Medical Research Council, MRC

### **Funding Body Type**

Government organisation

**Funding Body Subtype**

National government

**Location**

United Kingdom

**Funder Name**

Proposal in preparation collaboration with Institute Pasteur (coordinator: Prof. J.-M. Heard) in submission to European Union, Framework Package 7. Gene therapy of the brain in lysosomal storage diseases, Acronym: LSDGT. This will seek support for the industrial collaborator and preparation of the Investigational Medicinal Product - call

**Funder Name**

Q4 2010: Application to MRC & NIHR Efficacy and Mechanism Evaluation (EME) Programme jointly with the National Institute of Health Research to support Clinical Trial

**Funder Name**

Q4 2010 Application to Regional Clinical Research network for infrastructure support for clinical trial coordinator and nursing and ancillary healthcare staff

**Results and Publications****Publication and dissemination plan**

Not provided at time of registration

**Intention to publish date****Individual participant data (IPD) sharing plan****IPD sharing plan summary**

Not provided at time of registration