

# VAccination in ARThritis (VAART-onderzoek) - multicentre randomised clinical trial in patients with juvenile idiopathic arthritis: safety and efficacy of vaccination with live attenuated Measles, Mumps, Rubella vaccine

<b>Submission date</b> 23/08/2007	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 23/08/2007	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 14/02/2019	<b>Condition category</b> Musculoskeletal Diseases	<input type="checkbox"/> Individual participant data

**Plain English summary of protocol**  
Not provided at time of registration

## Contact information

**Type(s)**  
Scientific

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## Additional identifiers

**ClinicalTrials.gov (NCT)**  
NCT00731965

**Protocol serial number**

N/A

## Study information

### Scientific Title

VAccination in ARThritis (VAART-onderzoek) - multicentre randomised clinical trial in patients with juvenile idiopathic arthritis: safety and efficacy of vaccination with live attenuated Measles, Mumps, Rubella vaccine

### Acronym

VAART

### Study objectives

The primary objective of the study is to study the safety of Measles, Mumps, Rubella (MMR) booster vaccination in Juvenile Idiopathic Arthritis (JIA) patients by measuring JIA disease activity and the occurrence of measles, mumps or rubella infection.

The next primary objective is to evaluate the efficacy of the MMR booster vaccination in JIA patients by measuring protective immunity responses (specific anti measles, rubella, mumps antibodies by Enzyme-Linked Immunosorbent Assay [ELISA]) and functional antibody assays (measles neutralising antibodies) before and after MMR vaccination.

The secondary aim of the vaccination study is to analyse the influence on immune regulatory mechanisms capable of inducing JIA disease remission.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Centrale Commissie Mensgebonden Onderzoek (CCMO) and the Medical Ethics Committee of the participating centres for local feasibility, 07/02/2008, ref: NL 17376.000.07

### Study design

Multi-centre prospective randomised controlled open-label vaccination study

### Primary study design

Interventional

### Study type(s)

Prevention

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

Juvenile Idiopathic Arthritis (JIA)

### Interventions

Included patients will be randomised for one extra MMR booster vaccination (at age 4 to 8) or no additional vaccination (controls). Placebo vaccines will not be used in the control group.

N.B. In the Netherlands all children receive MMR booster vaccination at 9 years of age. Patients in both groups will also receive their usual MMR booster vaccine at age 9 according to the National Vaccination Program.

## **Intervention Type**

Biological/Vaccine

## **Primary outcome(s)**

Safety of MMR vaccination, according to:

1. JIA disease activity (defined by internationally validated core set criteria, number of disease flares in the 12 months after MMR vaccination and medication use), measured at baseline, and 3, 6 and 12 months after vaccination
2. Efficacy of MMR booster, defined by specific antibodies against measles, mumps and rubella, measured at baseline and 3 and 12 months after vaccination

## **Key secondary outcome(s)**

Secondary outcome measures are:

1. Number of Tregs, that are capable to suppress proliferation in vitro
2. Presence of anti-inflammatory cytokine profiles following MMR booster
3. Number and function of MMR-specific T cells

These are measured at baseline and three months after vaccination.

## **Completion date**

15/05/2011

# **Eligibility**

## **Key inclusion criteria**

1. All subtypes of JIA according to International League of Associations for Rheumatology (ILAR) criteria
2. Ages 4 to 8

## **Participant type(s)**

Patient

## **Healthy volunteers allowed**

No

## **Age group**

Child

## **Lower age limit**

4 years

## **Upper age limit**

8 years

## **Sex**

All

### **Key exclusion criteria**

1. Use of Infliximab (Remicade, anti-Tumour Necrotising Factor [anti-TNF] alpha therapy)
2. Participation in another (drug) trial
3. Primary immunodeficiency
4. Fever less than 48 hour prior to vaccination (here the moment of vaccination will be postponed for one month)
5. Evidence of viral or bacterial infection less than 48 hours prior to vaccination (here the moment of vaccination will be postponed for one month)
6. Methylprednisolone pulse therapy less than one month prior to vaccination (in these cases, the moment of vaccination will be postponed for one month)

Please note that, as of 11/09/2008, the following exclusion criterion has been removed:  
Use of Anakinra (Kineret, human interleukine-1-receptor antagonist)

### **Date of first enrolment**

15/05/2008

### **Date of final enrolment**

15/05/2011

## **Locations**

### **Countries of recruitment**

Netherlands

### **Study participating centre**

**University Medical Centre Utrecht**

Utrecht

Netherlands

3584 EA

## **Sponsor information**

### **Organisation**

University Medical Centre Utrecht (UMCU) (Netherlands)

### **ROR**

<https://ror.org/04pp8hn57>

## **Funder(s)**

### **Funder type**

Hospital/treatment centre

### Funder Name

University Medical Centre Utrecht (UMCU) (Netherlands)

## Results and Publications

### Individual participant data (IPD) sharing plan

#### IPD sharing plan summary

Not provided at time of registration

#### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	19/06/2013	14/02/2019	Yes	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes