

OVERVIEW

The Swiss-based company AB2 Bio is conducting a clinical study in North America (U.S.A. and Canada) and Germany, and recruiting patients in several regions. The aim of this Phase III study is to assess the efficacy and safety of **Tadekinig alfa** in **pediatric and adult patients** with monogenic, interleukin-18 driven autoinflammation caused by **NLRC4-MAS mutation or XIAP deficiency**.

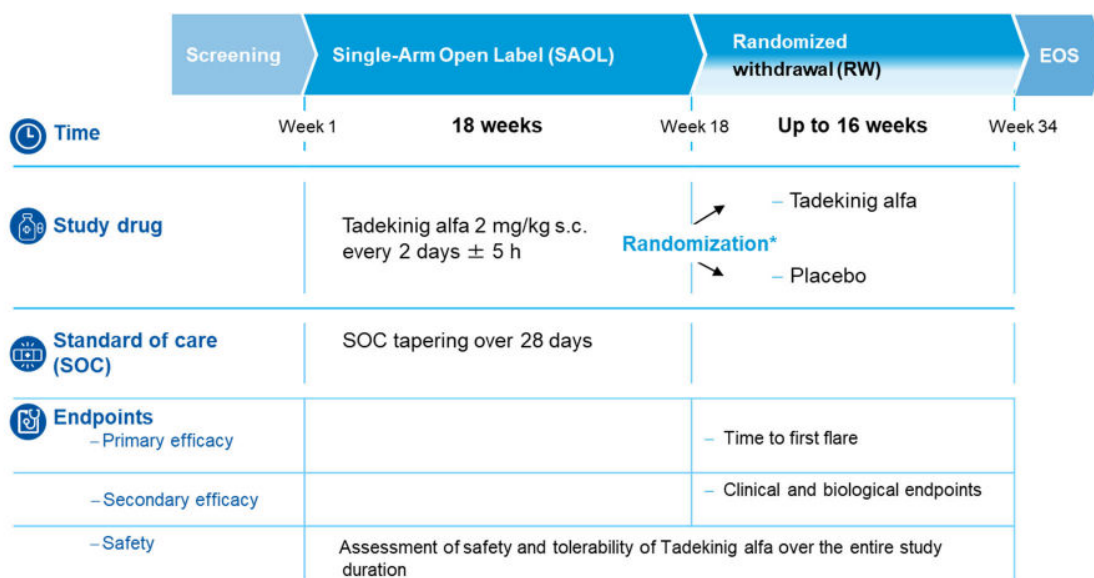
Tadekinig alfa is the drug name for a recombinant human interleukin-18 binding protein (r-hIL-18BP) which is administered by subcutaneous injections of 2 mg/kg every two days.

THERAPY UNDER STUDY

Monogenic disorders caused by NLRC4-MAS mutation and XIAP deficiency are generally associated with high levels of interleukin-18 (IL-18). We believe that treatment with **Tadekinig alfa** can inhibit the pro-inflammatory cascade triggered by IL-18, and may help to manage the severe symptoms of the disease such as hemophagocytic lymphohistiocytosis (HLH) or macrophage activation syndrome (MAS). This hypothesis is supported by the successful treatment of a patient carrying a mutation of the NLRC4 gene with **Tadekinig alfa** (Journal of Allergy and Clinical Immunology, 2017, 139, 1698-1701) and other preclinical and clinical research.

STUDY APPROACH

The NLRC4/XIAP Phase III Study is a multicenter, double-blind, placebo-controlled, randomized withdrawal trial to evaluate safety and efficacy of **Tadekinig alfa**:



* Responders (i.e. patients not flaring at the end of the SAOL) are randomized into the RW phase

Eligibility for this study will be determined in an initial screening visit.

The study has an overall duration of approximately 34 weeks: An 18-week single-arm, open-label (SAOL) phase, during which **Tadekinig alfa** will be administered in addition to the standard-of-care treatment used to control flares, immediately followed by an up to 16-week randomized-withdrawal (RW) phase to evaluate efficacy and safety. All patients who completed the SAOL phase without experiencing a flare at the end of SAOL will be enrolled in the RW phase, where they will be randomized to either **Tadekinig alfa** or placebo (IMP).

All study-related treatments and assessments are performed by one of the qualified study centers listed overleaf. Patients will visit the study center for the initial screening and baseline measurements, then for weekly or monthly assessments. For patients released from hospital, the IMP can be administered at the study center or by a home-care nurse at the patient's home. These services are offered as part of the study.

PATIENTS ELIGIBLE FOR TREATMENT

Key inclusion criteria for this study are:

- Patients across all ages (pediatric and adult)
- Patients with genetic diagnosis of NLRC4-MAS mutation or XIAP deficiency (caused by BIRC4 gene mutation)
- A history of ongoing inflammation with either ferritin \geq 500 ng/mL or persistent C-reactive protein (CRP) elevation \geq 2 times the upper limit of normal (ULN), AND
- Clinical manifestations with a Modified Autoinflammatory Disease Activity Index (mAIDAI) \geq 4 (based on Piram M, et al. Ann Rheum Dis 2014;73:2168–217)

For more information about inclusion/ exclusion criteria, please go to ClinicalTrials.gov ([NCT03113760](https://clinicaltrials.gov/ct2/show/study/NCT03113760)).

HOW TO ENROLL PATIENTS

Treating physicians: Please contact our Contract Research Organization to clarify the details of enrollment:
Precision for Medicine, 6005 Hidden Valley Road, Suite 170, Carlsbad, CA 92011

Maggie Bloomberg Sr. Project Manager: (+1) 760 658 5913 or Maggie.Bloomberg@precisionformedicine.com

Laurie McPherson Clinical Team Lead: (+1) 760 557 1612 or Laurie.McPherson@precisionformedicine.com

Study website: www.ab2bioresearch.com

Facebook: <https://www.facebook.com/AB2Bio-NLRC4-XIAP-Clinical-Study-107203028232933>

LEAD PRINCIPAL INVESTIGATOR

Edward M. Behrens, MD

Chief, Division of Rheumatology, The Children's Hospital of Philadelphia

QUALIFIED STUDY CENTERS AND INVESTIGATORS

United States:

Boston Children's Hospital, Boston, MA, **Dr. Fatma Dedeoglu**

Children's Hospital of Philadelphia, Philadelphia, PA, **Dr. Edward Behrens** (Lead Principal Investigator)

Children's Healthcare of Atlanta, Atlanta, GA, **Dr. Shanmuganathan Chandrakasan**

Cincinnati Children's Hospital Medical Center, Cincinnati, OH, **Dr. Rebecca Marsh**

Rady Children's Hospital, San Diego, CA, **Dr. Harold Hoffman**

Shand's Children's Hospital, Gainesville, FL, **Dr. Akaluck Thatayatikom**

Texas Children's Hospital, Houston, TX, **Dr. Lisa Forbes Satter**

Canada:

CHU Sainte-Justine, Montreal, **Dr. Julie Barsalou**

The Hospital for Sick Children (SickKids), Toronto, **Dr. Ronald Laxer**

Germany:

Center for Chronic Immunodeficiency, University of Freiburg, **Dr. Stephan Ehl**

SPONSOR

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