

Examples of potentially eligible study participants

EXAMPLE 1:	EXAMPLE 2:	EXAMPLE 3:	EXAMPLE 4:
Never achieved partial or complete remission	Achieved partial/complete remission but developed recurrence- adolescent	Achived partial/complete remission but developed recurrence	Achieved partial/complete remission, developed recurrence on taper, need to regularly re-evaluate UPCR for eligibility
<ul style="list-style-type: none"> 54-year-old Hispanic male 	<ul style="list-style-type: none"> 16 yr old Caucasian female 	<ul style="list-style-type: none"> 43 year-old African American female 	<ul style="list-style-type: none"> 51-year-old male
1 year ago:	2 years ago:	4 years ago:	10 months ago:
<ul style="list-style-type: none"> Edema, biopsy confirmed primary FSGS Started on tacrolimus 2 mg twice daily 	<ul style="list-style-type: none"> Fatigue, anasarca, UPCR 10 g/g Started on 2 mg/kg/day of prednisone 	<ul style="list-style-type: none"> Sudden onset swelling UPCR 16 g/g Biopsy confirmed primary FSGS 	<ul style="list-style-type: none"> Anasarca,, UPCR 6.5 g/g Biopsy with primary FSGS
3 months later:	Weeks later:		4 months later:
<ul style="list-style-type: none"> Reduction of UPCR: 10 → 4 g/g → diarrhea, hyperkalemia and hypomagnesemia 	<ul style="list-style-type: none"> Full remission → Prednisone tapered → relapsed 	<ul style="list-style-type: none"> Prednisone 80 mg daily → Partial remission → UPCR < 3 g/g Insomnia, weight gain, acne, irritability 	<ul style="list-style-type: none"> Started on high dose steroids at 60 mg daily
Currently:	Next 3 mos:	6 months later:	3 months later:
<ul style="list-style-type: none"> Max dose losartan and dapagliflozin UPCR between 4 to 6 g/g for the past 2 months eGFR 60 mL/min/1.73 m² 	<ul style="list-style-type: none"> Remission, followed by relapse during taper x3 Biopsy → minimal change disease Started on tacrolimus 	<ul style="list-style-type: none"> → Prednisone tapered off 	<ul style="list-style-type: none"> Complete remission again, UPCR 0.1 g/g 2 weeks after completion of taper, UPCR rose to 3.6 g/g Steroids increased again to 60 mg daily
	12 months later:	Next 2 years:	
	<ul style="list-style-type: none"> Nonadherent to trough monitoring 	<ul style="list-style-type: none"> → UPCR continued in 1.5-2.5 g/g → Maintained on lisinopril and dapagliflozin Rapid weight gain (10 lbs over preceding mos) 	
	Currently:	Currently:	
	<ul style="list-style-type: none"> UPCR 3.5 g/g, eGFR 61 mL/min/1.73m² Family interested in other steroid sparing agent 	<ul style="list-style-type: none"> UPCR increased to 6 g/g eGFR 67 mL/min/1.73 m² 	<ul style="list-style-type: none"> Complete remission again, UPCR 0.1 g/g 6 weeks into steroid taper UPCR rose again to 2.7 g/g Not tolerating steroids Noted UPCR was not eligible for trial at that time (2.7 g/g < 3 g/g) Asked to return to clinic in 2 weeks UPCR noted then to be 3.1 g/g, eGFR 55 ml/min/1.73 m² so he is referred to this clinical trial.



RESULT

Renal Efficacy Signaling Umbrella Trial

In Primary Focal Segmental Glomerulosclerosis (FSGS) or Minimal Change Disease (MCD)

References

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The agents mentioned here are investigational and have not been approved by the US Food and Drug Administration (FDA) or any other regulatory agency worldwide for the uses under investigation. No conclusions regarding safety and efficacy should be drawn for such agents.

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Brochure for healthcare provider use

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Primary focal segmental glomerulosclerosis (FSGS) and minimal change disease (MCD) are clinico-pathologic diagnoses that are glomerular patterns of injury mediated by a common underlying immunologic pathway [1]. This pathway culminates in progressive loss of the glomerular filtration barrier function, leading to nephrotic range proteinuria and nephrotic syndrome, the clinical hallmark of primary FSGS/MCD. The current standard of care consists of high dose corticosteroids or non-steroid immunosuppressive therapies, all of which are associated with significant toxicity and variable effectiveness [2].

The efficacy of immunosuppressive therapies and numerous studies on the molecular and cellular pathogenesis of primary FSGS/MCD have highlighted the critical role for T-cell, B-cell, and cytokine-mediated pathways within the immune system. Specifically, multiple lines of evidence suggest that CD40 ligand (CD40L), OX40 ligand (OX40L), Tumor necrosis factor alpha (TNF α), and Bruton's tyrosine kinase (BTK) each play a significant role in the cell signaling pathways that underlie pathogenesis [3,4,5,6]

Frexalimab

is a monoclonal antibody that inhibits T-cell-dependent B-cell activation by blocking the costimulatory CD40/CD40L pathway.

SAR442970

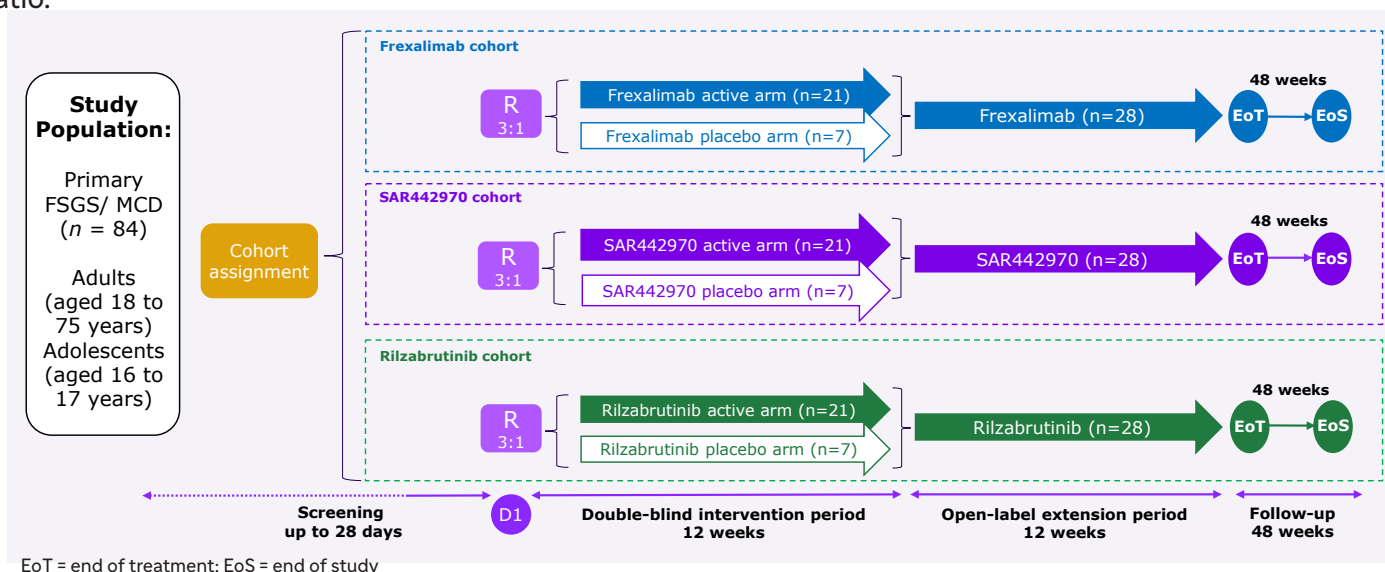
is a novel bispecific NANOBODY[®] molecule that inhibits both TNF α , which plays a role in a variety of inflammatory processes, and OX40L, which plays a role in costimulation and maintenance of effector T cells.

Rilzabrutinib

is a small molecule that inhibits BTK signaling, which is expected to inhibit B cell maturation and reduce pathogenic autoantibody production.

Each of these investigative agents inhibit downstream signaling and/or immune cell differentiation, proliferation, and survival and are in various stages of development by Sanofi for other immune-mediated conditions.

RESULT is a Phase 2a, randomized, double-blind, placebo-controlled trial to simultaneously evaluate the efficacy, tolerability and safety of Frexalimab, SAR442970, and Rilzabrutinib in participants with biopsy-proven FSGS or MCD. These target specific aspects of the adaptive immune response that drive the underlying pathogenesis of disease, and they have the potential to decrease the urine protein-to-creatinine ratio.



The study is planned to include approximately **84 participants worldwide** (in approximately 20 countries) and will be divided into 4 periods: screening, double blind intervention period, open label extension period, and follow-up period.



KEY INCLUSION CRITERIA:

- Aged 16-75 years at time of screening
- Biopsy-proven primary FSGS or MCD
- Urinary Protein Creatinine Ratio ≥ 3 g/g
- eGFR * ≥ 45 mL/min/1.73 m²
- Documented history of response to corticosteroid or other immunosuppressive therapy
- Stable dose of prednisone or equivalent ≤ 10 mg/day

*eGFR = estimated glomerular filtration rate



KEY EXCLUSION CRITERIA:

- Genetic or secondary FSGS or MCD
- Current or prior ESKD requiring dialysis or transplantation
- History, clinical evidence, suspicion, or significant risk for thromboembolic events, myocardial infarction, stroke, and/or antiphospholipid syndrome
- High-dose of steroids (> 10 mg/day prednisone or equivalent), or change in disease within 1-week prior to randomization

IMPORTANT POTENTIAL RISKS:

Based on the review of available non-clinical, clinical and literature data, these are considered as important potential risks for the respective study drugs.

Frexalimab:

- Infections
- Immunogenicity/hypersensitivity
- Thromboembolic events
- Injection site reactions/local tolerability at injection site

SAR442970:

- Infections
- Malignancies
- Anaphylaxis or serious allergic reactions including hypersensitivity reactions
- Hepatitis B virus reactivation
- Demyelinating disease
- Cytopenia, pancytopenia
- Heart failure
- Lupus-like syndrome
- Reduced antibody response to vaccination

Rilzabrutinib:

- Infections
- Liver enzyme elevation
- Uveitis