# **LIPOSORBER**®

Provides Hope When Drug Therapy Fails™

## For Your Pediatric and Adult **Primary FSGS Patients**

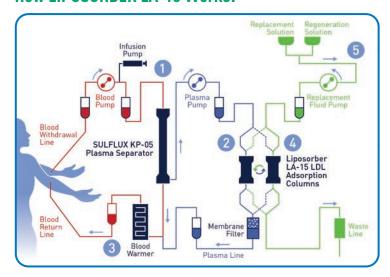
### Consider LIPOSORBER therapy for primary FSGS patients when:

- standard therapies have failed or are not well-tolerated & patient's GFR≥60ml/min/1.73m<sup>2</sup>
- FSGS recurs after renal transplantation.

#### **Treatment Frequency:**

- 2x a week for 3 weeks followed by 1x a week for 6 weeks.
- Each treatment lasts about 2-4 hours.

#### **How LIPOSORBER LA-15 Works:**



- 1. Blood is withdrawn and goes through the plasma separator.
- 2. Plasma passes through the LIPOSORBER Adsorption Column, selectively removing LDL, Lp(a) and VLDL.
- 3. Plasma is recombined with blood cells and returns to the blood warmer, then is returned to the patient.
- 4. When the primary LIPOSORBER Adsorption Column processes certain amounts of blood, the computer-regulated machine automatically switches the plasma flow to the secondary column.
- 5. The primary column is regenerated, eluting waste and re-primed to be ready for the next cycle of adsorption.

LIPOSORBER is the only FDA authorized Humanitarian Use Device (HUD) for the treatment of patients with nephrotic syndrome associated with primary FSGS.1



Plasma

LIPOSORBER® Double

Adsorption Columns (Liposorber LA-15)

Tubing

Separator

Column

Just 12

**Treatments** 

Over

9 Weeks

800-526-3522

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LIPOSORBER® MA-03

Apheresis Machine

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#### LIPOSORBER® SELECTIVITY FEATURE

The adsorbent columns are made up of **dextran sulfate cellulose beads**, which provide specific binding to certain lipids such as LDL-C, Lp(a), and VLDL.

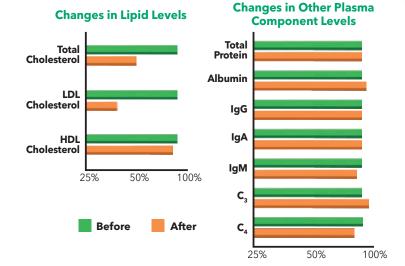


LIPOSORBER
Reduces LDL-C
and Total
Cholesterol<sup>3</sup>

By effectively decreasing total cholesterol and LDL-C, LIPOSORBER promotes:

- Direct podocytes effects:
  - Decreases lipotoxicity to the glomeruli<sup>4</sup>
- → Immunologic effects:
  - Improves response to corticosteroid and cyclosporine<sup>2</sup>

Unlike therapeutic plasma exchange (TPE), **LIPOSORBER** minimally affects other blood components.<sup>5</sup>



#### **EFFICACY OF LIPOSORBER**



#### Remission of proteinuria

LIPOSORBER LA-15 therapy has induced complete or partial remission of proteinuria in up to 50% of patients with both drug-resistant and recurrent FSGS.<sup>3</sup>

#### Improved responsiveness



Lipoprotein-apheresis (LA) therapy improves corticosteroid and cyclosporine action and responsiveness in patients with drug resistance, which is likely due to the restoration of cellular uptake and the inhibition of drug efflux.<sup>2</sup>



**ADVERSE EVENTS:** The most common adverse events are hypotension (0.8%), nausea/vomiting (0.5%), and flushing/blotching (0.4%). Other adverse reactions include angina/chest pain, shortness of breath, fainting, lightheadedness and anemia.<sup>1</sup> \*Please see **liposorber.com** for a full list of adverse events.



**CONTRAINDICATION:** Angiotensin converting enzyme [ACEI(s)] inhibitors are contraindicated with LIPOSORBER® due to possible bradykinin reaction. ACEI(s) should be replaced with angiotensin II receptor blockers (ARBs) or any other antihypertensive agent as determined by the prescribing physician. <sup>1</sup>

#### **References:**

- 1. Kaneka Medical America LLC., 2021, LIPOSORBER®LA-15 SYSTEM Operator's Manual No.1002en-R4
- 2. Muso, E. Beneficial effect of LDL-apheresis in refractory nephrotic syndrome. Clin Exp Nephrol 2014; 18: 286-290.
- 3. Muso, E et al. Immediate therapeutic efficacy of LDL apheresis for drug-resistant nephrotic Syndrome: evidence from the short-term results from the POLARIS Study. Clin Exp Nephrol. 2015; 19: 379-386.
- 4. Raina R, Wang J, Sharma A, Chakraborty R: Extracorporeal Therapies in the Treatment of Focal Segmental Glomerulosclerosis. Blood Purif 2020;49:513-523. doi: 10.1159/000506277
- 5. Rubba, Paolo et al. Hemodynamic changes in the peripheral circulation after repeat low density lipoprotein apheresis in familial hypercholesterolemia. Circulation 81 2 (1990): 610-6.

