



# LIPOPAK®

Adsorption column for  
atherogenic lipoproteins removal



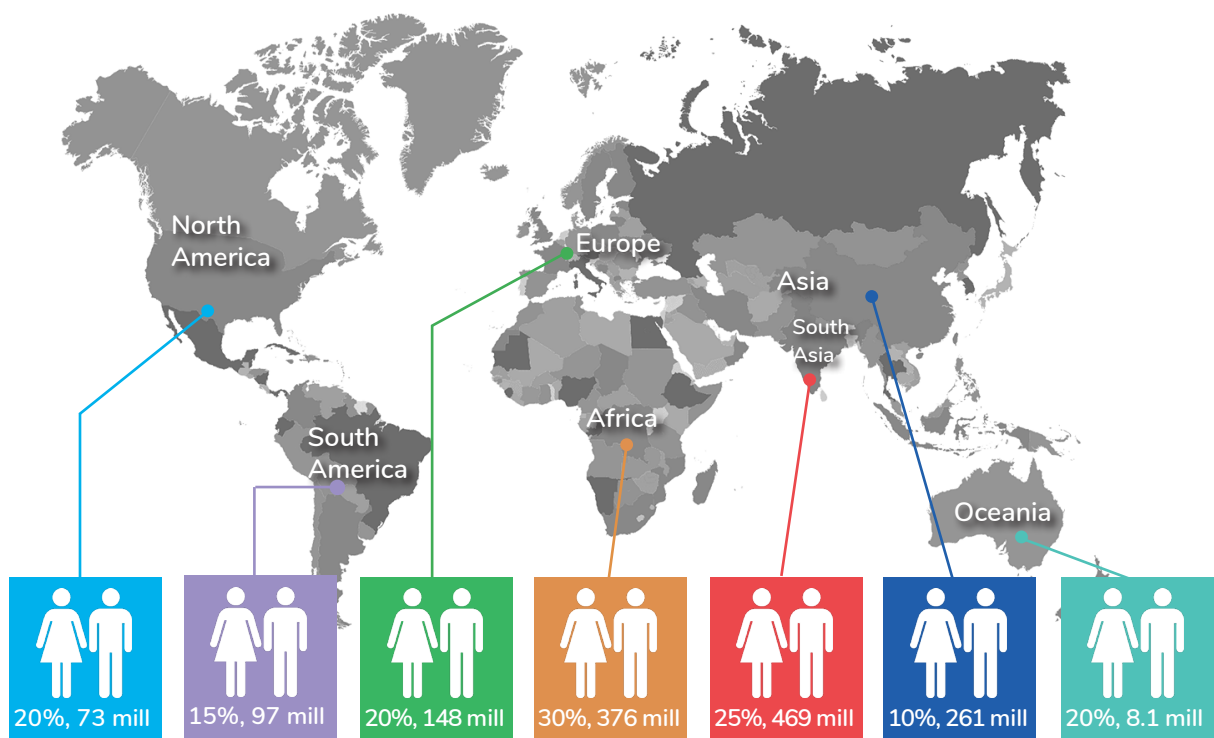
POCARD LTD.

THERAPEUTIC APHERESIS TECHNOLOGIES

Elevated cholesterol levels of atherogenic lipoproteins as a result of lipid metabolism disorders are one of the main risk factors for coronary atherosclerosis, coronary heart disease, heart attack and stroke.

Low-density lipoprotein apheresis (LDL apheresis) is an effective method of reducing the concentration of atherogenic lipoprotein cholesterol in cases where drug therapy is not effective enough or there are contraindications to its use.

### Prevalence of hyperlipoproteidemia(a) in the world

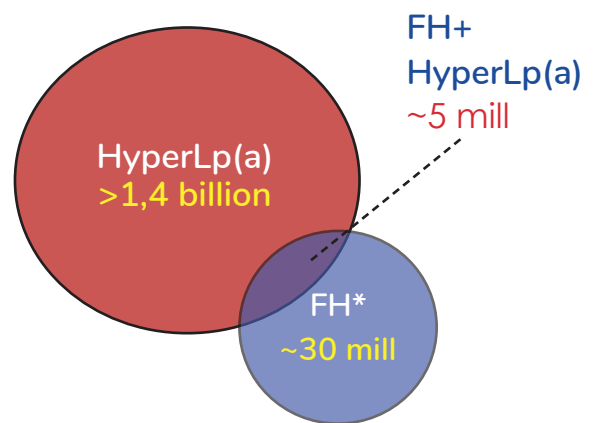
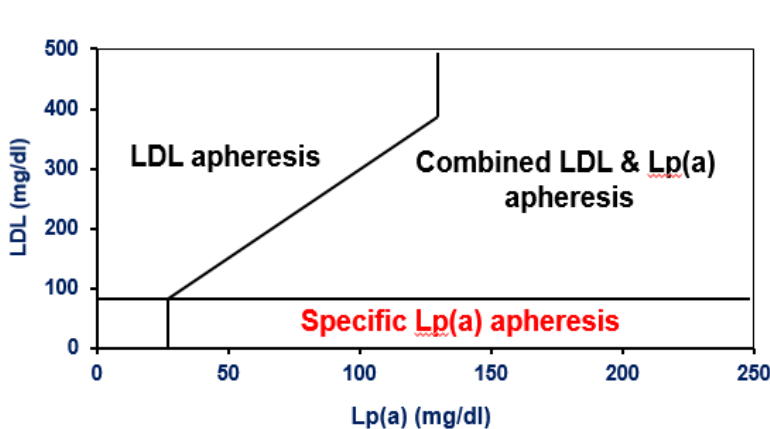


Lp(a)>50 mg/dl - from 10 to 30% in different populations. There are 1.43 billion people with hyperlipoproteidemia (a) in the

Application of modern lipid-lowering drugs makes it possible to correct LDL cholesterol levels with high efficiency, but LDL apheresis has remained relevant for a number of particularly severe cases of hypercholesterolemia.

At present it's highly important to correct the level of Lp(a) – another atherogenic lipoprotein, independent risk factor for the development of coronary atherosclerosis. In contrast to LDL, the concentration of Lp(a) in plasma is genetically determined and is resistant to existing medications, including the current generation of statins, and pharmacological approaches are not associated with changes in lifestyle and diet. As recent studies have shown, the elevated Lp(a) level, widespread among the population, is the main cause of atherosclerosis development. The only and most effective approach to correcting the level of Lp(a) is currently efferent therapy methods that allow removing up to 88% of Lp(a) circulating in blood plasma.

**Lipopak® column** – a new product designed for apheresis of all atherogenic lipoproteins, combining the properties of the previous generation of products - specific anti-LDL and anti-Lp(a) sorption columns. The Lipopak® column has an increased affinity for Lp(a), which makes it possible to effectively bind this lipoprotein, despite the fact that its concentration in the bloodstream is almost an order of magnitude less than LDL. At the same time, if there is an increased concentration of LDL, the column will also remove its excess. Thus, the Lipopak® column provides an effective approach to correcting the lipid composition of the patient's blood



\*FH- familial hypercholesterolemia (FH)

## Indications for use

- Familial homozygous hypercholesterolemia – treatment of choice
- Familial heterozygous hypercholesterolemia resistant to drug therapy
- Prevention of restenoses and occlusions of autovenous shunts after myocardial revascularization operations
- Cardiovascular diseases caused by elevated lipoprotein(a) levels (> 30 mg/dl)

## Column properties

- Regenerable, for individual repeated use (18 sorption cycles)
- Column volume 300 ml
- Sorption capacity -  $2,4 \pm 0,8$  g of atherogenic lipoprotein cholesterol
- Designed for plasmosorption procedure





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## References

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1. Tsimikas S, Fazio S, Ferdinand KC, et al. NHLBI Working Group Recommendations to Reduce Lipoprotein(a)-Mediated Risk of Cardiovascular Disease and Aortic Stenosis. *J Am Coll Cardiol.* 2018;71(2):177-192.
2. Vuorio A, Watts GF, Schneider WJ, Tsimikas S, Kovanen PT. Familial hypercholesterolemia and elevated lipoprotein(a): double heritable risk and new therapeutic opportunities. *J Intern Med.* 2020;287(1):2-18.