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NEW DRUGS FOR THE TREATMENT OF DYSLIPIDEMIA

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Dyslipidemia is the leading risk factor for the development of atherosclerosis and associated consequences, such as coronary heart disease, ischemic cerebrovascular and peripheral vascular disease. These diseases are the major cause of mortality in the world and in Europe as well, where they are responsible for around 45% of all deaths. Treatment of dyslipidemia includes the use of statins, ezetimibe, fibrates, niacin, bile acids sequestrants and omega-3 fatty acids. Although statins play the major role in dyslipidemia treatment by reducing the risk of cardiovascular (CV) events by 30%, there is a need for additional new drugs that reduce the residual risk even more. PCSK9 inhibitors, apolipoprotein B (apoB) synthesis inhibitors, MTP inhibitors and CETP inhibitors are already approved for the specific indications, or are in the advanced stages of clinical investigation. Two PCSK9 inhibitors, alirocumab and evolocumab are approved for use in combination with statins for the treatment of heterozygous familial hypercholesterolemia (FH), but also in patients with clinical atherosclerotic CV diseases who require additional low-density lipoprotein cholesterol (LDL-C) level reduction. In addition, evolocumab is approved for use in patients with homozygous FH. Mipomersen, apoB synthesis inhibitor, lomitapide, and oral MTP inhibitor are currently approved in the treatment of patients with homozygous FH as an adjunct to the maximum tolerated doses of statins and other lipid-lowering drugs. Although the new lipid-lowering agents produce significant LDL-C level reduction, more clinical studies are necessary to confirm their efficacy and safety in dyslipidemia treatment.

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