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Используя словарь и справочные пособия, переведите устно следующий фрагмент научного текста.

***Interplay between Membrane Curvature and Cholesterol:
Role of Palmitoylated Caveolin-1***

The caveolin family of proteins plays an important role in cell signaling and membrane trafficking. Caveolin-1 (cav-1), the most widely studied member, has been shown to colocalize with cholesterol-rich, high-curvature membrane domains known as caveolae. These caveolar complexes form a scaffold that compartmentalizes various signal transducers and regulate their cellular trafficking and activity. Because of its central role in cell signaling, cav-1 has been implicated in cancer as well as in a wide range of other diseases such as diabetes, muscular degenerative disorders, atherosclerosis, and pulmonary fibrosis. An interesting feature of the cav-1 protein is that it is palmitoylated on three cysteine residues at the C-terminal by the reversible attachment of a 16-carbon acyl chain via a thioester bond. Palmitoylation of cav-1 has been reported to play a role in cell signaling and membrane trafficking but not in its transport to caveolae. Similarly, a GFP-fused cav-1 protein was able to anchor GFP to membranes in the absence of the palmitoyl tail. In addition, the effect of the palmitoyl tail on the structure of the protein is negligible, as demonstrated for caveolin-3, a close homolog of cav-1. However, the role of palmitoylation in cav-1 remains unclear, and whether it acts simply as a lipid anchor or helps in the formation of cholesterol-rich caveolae remains to be answered.