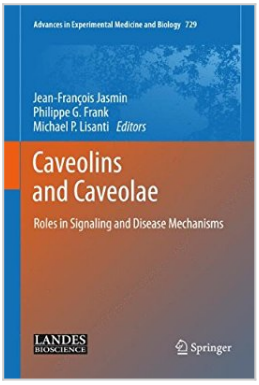

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Caveolae are 50-100 nm flask-shaped invaginations of the plasma membrane that are primarily composed of cholesterol and sphingolipids. Using modern electron microscopy techniques, caveolae can be observed as omega-shaped invaginations of the plasma membrane, fully-invaginated caveolae, grape-like clusters of interconnected caveolae (caveosome), or as transcellular channels as a consequence of the fusion of individual caveolae. The caveolin gene family consists of three distinct members, namely Cav-1, Cav-2 and Cav-3. Cav-1 and Cav-2 proteins are usually co-expressed and particularly abundant in epithelial, endothelial, and smooth muscle cells as well as adipocytes and fibroblasts. On the other hand, the Cav-3 protein appears to be muscle-specific and is therefore only expressed in smooth, skeletal and cardiac muscles. Caveolin proteins form high molecular weight homo- and/or hetero-oligomers and assume an unusual topology with both their N- and C-terminal domains facing the cytoplasm.

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Editorial Review

From the Back Cover

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Jean-François Jasmin, PhD, obtained his degree at the University of Montreal (Montreal, Canada) in 2004. From 2004 to 2007, he was a Post-Doctoral Fellow at both the Albert Einstein College of Medicine (Bronx, NY; Department of Molecular Pharmacology) and the Thomas Jefferson University (Philadelphia, PA; Department of Cancer Biology). Currently, he is an Assistant Professor (Tenure-Track) in the Department of Stem Cell Biology and Regenerative Medicine at the Thomas Jefferson University (Philadelphia, PA). The current focus of his laboratory is on the role of caveolin proteins in the development of cardiovascular and pulmonary diseases.

Philippe G. Frank, PhD, obtained his degree in 1998 at the University of Ottawa (Ottawa, Canada), under mentor Professor Yves L. Marcel, a pioneer in lipoprotein studies. Dr. Frank’s doctoral dissertation examined the role and function of apolipoprotein A-I in the reverse cholesterol transport pathway. Also in 1998, he continued his career with a post-doctoral fellowship at the Albert Einstein College of Medicine (Bronx, NY). There, his project focused on the role of caveolin proteins in cancer and atherosclerosis, in addition to lipoprotein and cholesterol metabolism. In 2006, he joined the Kimmel Cancer Center as an Assistant Professor at Thomas Jefferson University in Philadelphia, Pennsylvania, where he focuses on the role of lipoproteins in cancer and vascular diseases.

Michael P. Lisanti, MD, PhD, obtained his degrees at Cornell University Medical College (New York, NY) in 1992. From 1992-97, he was a Fellow at the Whitehead Institute at MIT (Cambridge, MA), affiliated with Dr. Harvey Lodish’s laboratory. Currently, he is Chairman of the Stem Cell Biology and Regenerative Medicine Department, Leader/ Director of the Program in Molecular Biology and Genetics of Cancer, and Director of the Stem Cell Biology and Regenerative Medicine Center at the Thomas Jefferson University (Philadelphia, PA) as well as Editor-in-Chief of the *American Journal of Pathology*. The current focus of his laboratory is on the role of caveolin-1 in cancer pathogenesis.

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