

Fasentin, a glucose uptake inhibitor, is also able to inhibit angiogenesis

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The role of glucose on endothelial cell (EC) metabolism and angiogenesis has been an emerging issue in the last few years. Some inhibitors of glucose metabolism, such as 2-deoxyglucose, have been shown to have anti-angiogenic effects. Fasentin is a poorly studied inhibitor of glucose uptake which modulates GLUT-1 and GLUT-4 transporters in cancer cells. We wanted to test its possible effect on EC glucose uptake, showing a slight decrease in HMEC at 100 μ M. Lower doses did not affect this characteristic of glucose metabolism. In line with this fact, fasentin at 100 μ M totally inhibited tube formation on Matrigel in these cells. This anti-angiogenic effect is not likely to be helped by a pro-apoptotic effect of fasentin but, as proved with additional assays, it could be due to a decrease on the signaling for extracellular matrix degradation. More research would be necessary in order to elucidate its fine regulation on angiogenesis and metabolism.

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