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 light decrease in HMEC at 100 µM. Lower doses did not affect this characteristic of glucose metabolism. In line with this fact, fasentin at 100 µM 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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