

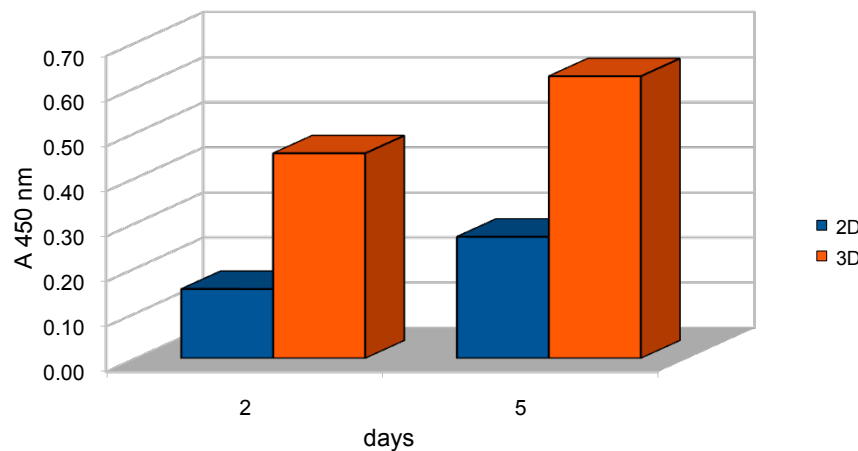
Growth of Breast Cancer Cell Line on Porocell-3d™ matrix

The proliferation and function of the MDA-MB-231 breast cancer cell line on a Porocell-3d™ matrix was compared to the growth of the same cell line in a conventional 2-d monolayer. The proliferation was measured by monitoring of WST-8 reduction after 2 and 5 days.

For each of triplicate experiments 3 million cells were loaded either into a well plate as a monolayer or onto a 1 cm diameter Porocell-3d™ matrix disk. The Porocell-3d™ disk was coated with polylysine (HAC Biomed product number 15241). For all experiments identical growth media was used, (600 µl DMEM plus non-essential amino acids and vitamins for MEM medium and 10 % FCS). A third of the medium was exchanged against fresh medium each day. Proliferation was measured by reduction of WST-8 at 450 nm. Cell function was measured by secretion of the cytokine CXCL-1 in the medium by ELISA.

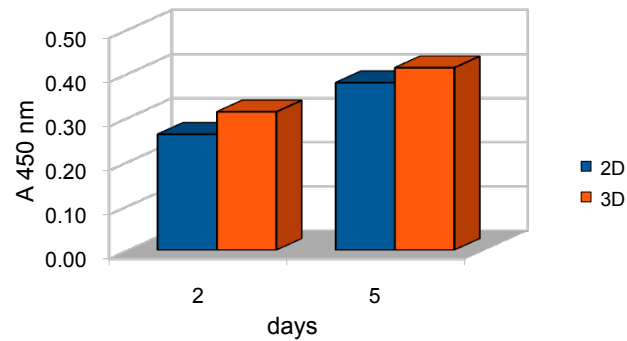
Chart 1 shows the result of the proliferation and metabolic activity of the monolayer compared to the Porocell-3d cell carrier. The proliferation and metabolic activity of the same number of cells seeded onto the Porocell-3d™ matrix is more than double that of the monolayer.

Chart 1: MDA-MB-231 breast cancer cell line



The cell function is shown in Chart 2. The secretion of CXCL-1 protein is slightly elevated in the Porocell-3d™ series.

Chart 2: CXCL-1 secretion by MDA-MB-231



The seeding of Porocell-3d matrices is straight forward and allows exploration of 3-dimensional cell cultures within the same time window of 2-dimensional cell cultures. Compared to other 3-dimensional cell culture tools the porous 3-dimensional matrices may prove to be a more versatile tool for studying cell culture function.