

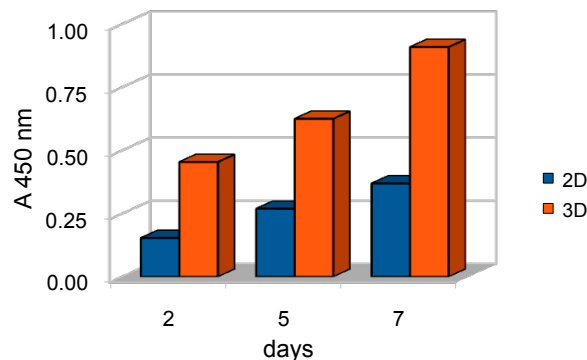
## Growth of Hepatoma Cancer Cell Line on Porocell-3d™ matrix

The proliferation and function of the HepG2 hepatoma 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, 5, and 7 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 Williams medium E containing 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 albumin in the medium by ELISA.

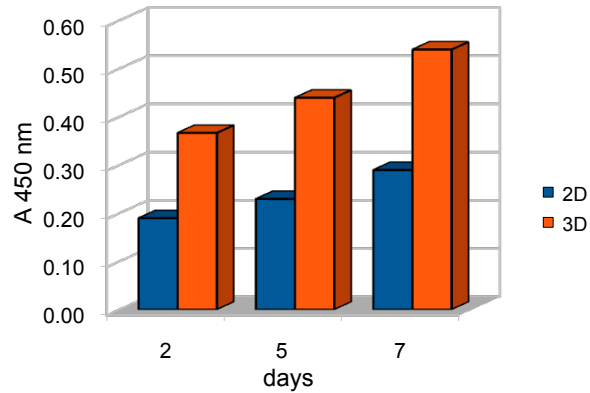
Chart 1 shows the result of the proliferation and metabolic activity of the monolayer compared to the Porocell-3d cell carrier. The proliferation and metabolic activity of the same number of cells seeded onto the Porocell-3d™ matrix is more than double that of the monolayer.

Chart 1: HepG2 hepatoma cell line



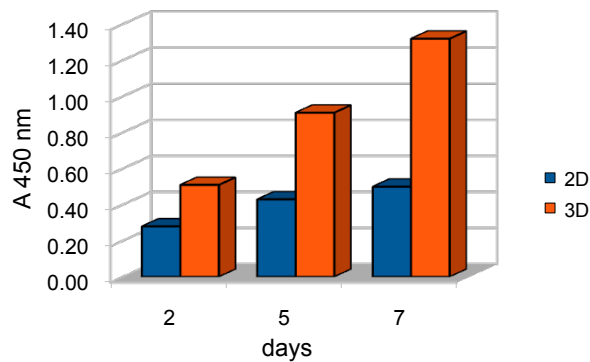
The cell function is shown in Chart 2. The secretion of albumin is nearly doubled in the Porocell-3d™ series.

Chart 2: Albumin production



Another hepatoma cell line, SK-HEP-1 cells showed almost 3-fold proliferation in the Porocell-3d™ matrix compared to the monolayer (Chart 3), grown in RPMI 1640 medium containing 20 % FCS. As expected, no albumin secretion could be detected in this cell line in both the monolayer and the matrix.

Chart 3. Proliferation of SK-Hep-1 cells



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.