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STANDARDIZED CULTIVATION OF HUMAN CELL CULTURES FROM TISSUE SAMPLES AND GROWTH CONTROL

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Based on the method in the article "Diagnose und Therapie von Krebszellen", this publication, skin fibroblasts were cultivated from prepuce. The tissue was separated into small pieces and stored either in a culture flask or a petri dish with a cover glass. A small layer of BME medium with 10% serum and ingredients covered the samples.

After a 3 week incubation period at 37 degree Celsius, cells grew out of the tissue sample as shown on the figure 1 and 2. Within a few days the cell number increased rapidly due to a log-phase growth.

After reaching confluency in the flasks, cells were detached by trypsin and subcultured.

Comparative growth control of fibroblast monolayers can be carried out by photometric measurements. Cells are cultivated in titer plates with 88 single niches. After reaching the transition from the log-phase-growth to the plateau-phase, the alive cells of the unsuspended cell monolayer are stained with neutral red and measured in the photometer: the net-absorption of a light beam with 492 nm, passing through each single nich in the whole sample, is detected. Because the absorption in each nich increases with the number of stained cells, the relative cell growth can be determined by the absorption factor of each nich.

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Fig. 1

Fig. 1 and 2: Develop of human skin fibroblasts from a prepuce tissue sample.

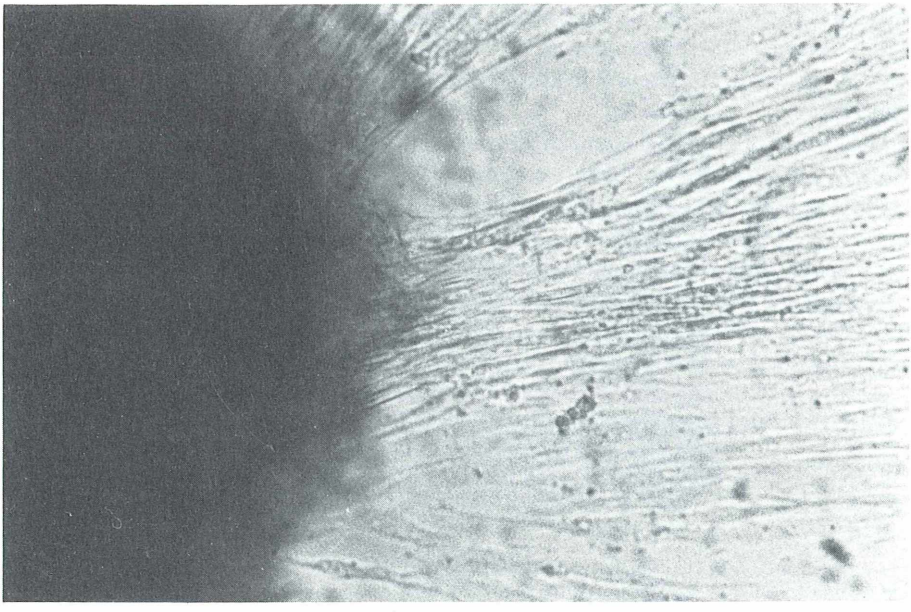

Fig. 2