Abstract

The invention relates to a method and a device for initiation of growth of cells and for cultivation of cells in high densities, wherein the cells to be cultivated are located in hollow-filament membranes and are brought alternately into a liquid nutrient medium and a gas phase present thereabove. The device is a liquid-gas-phase exposure bioreactor containing a supply chamber in which there are disposed hollow-filament membranes having an inside diameter of no larger than 5 mm and whose inner volume forms culture compartments. After the cells have been introduced into the culture compartments, approximately one half of the supply chamber is filled with nutrient medium and the other half with a gas mixture. After perfusion of medium and gas has been turned on, cyclic exposure of the hollow-filament membranes and of the cells contained therein in the gas or liquid phase begins.