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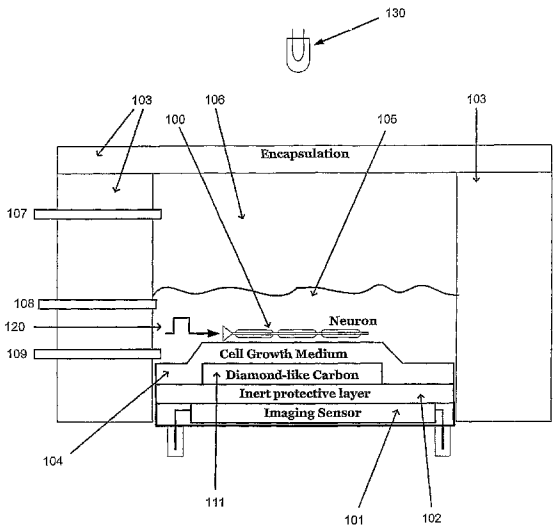
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(54) Title: APPARATUS AND METHOD FOR DETECTING ACTIVITY OF LIVING CELLS



(57) Abstract: An apparatus for detecting the activity of living cells comprises a cell growth medium layer (104) for receiving the cells (100) and an imaging sensor (101) , e.g. a CCD array, wherein the cell growth medium layer and the imaging sensor are separated from each other only by an inert protective layer (102) and an optional diamond-like carbon layer (111) . The cells may be stained by a fluorescent dye, such as a calcium, ion, voltage or pH indicator dye. Upon illumination by a light source (130) the cells emit fluorescent light which is directly detected by the imaging senor without any optical transfer elements such as lenses or mirrors. The apparatus ,may be enclosed in a housing (103) provided with gas and liquid ports (107, 108, 109) . Furthermore the apparatus may comprise means (120) for applying a stimulation signal to the cells.

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