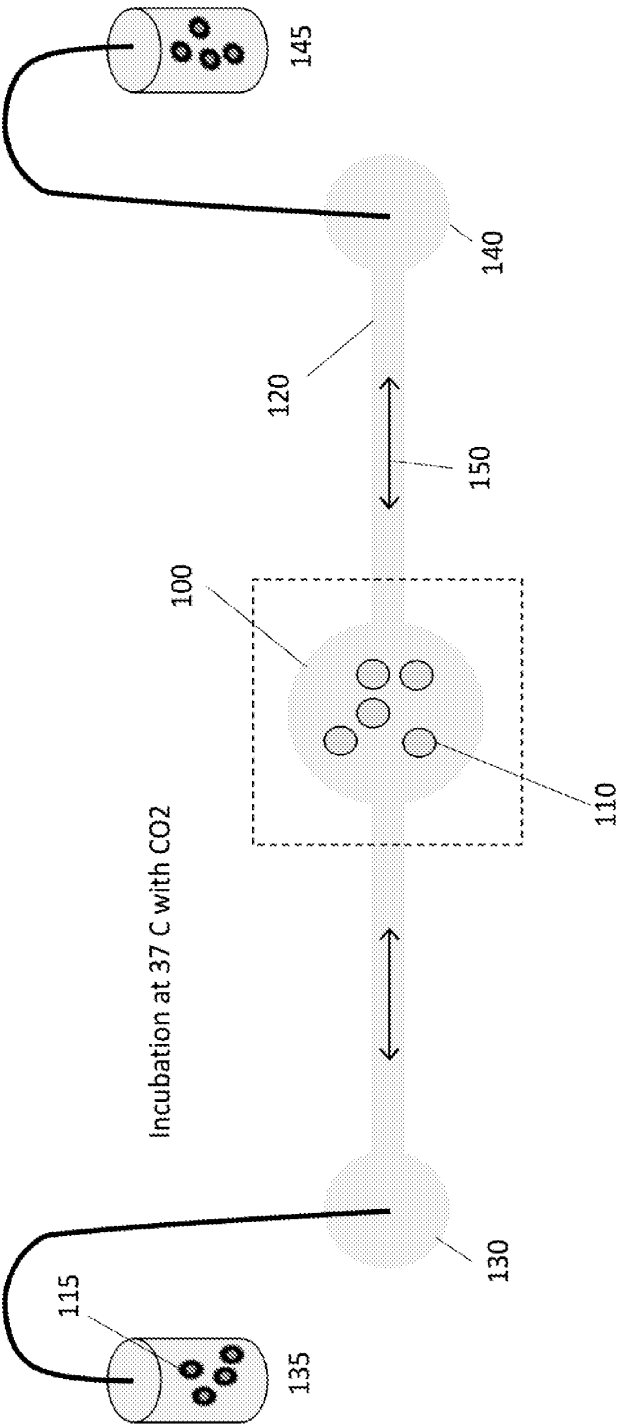




● Microcarrier/disc/support with cells/larger or variable size micro/macrocarrriers
● Adventitious agent / virus

FIG. 1

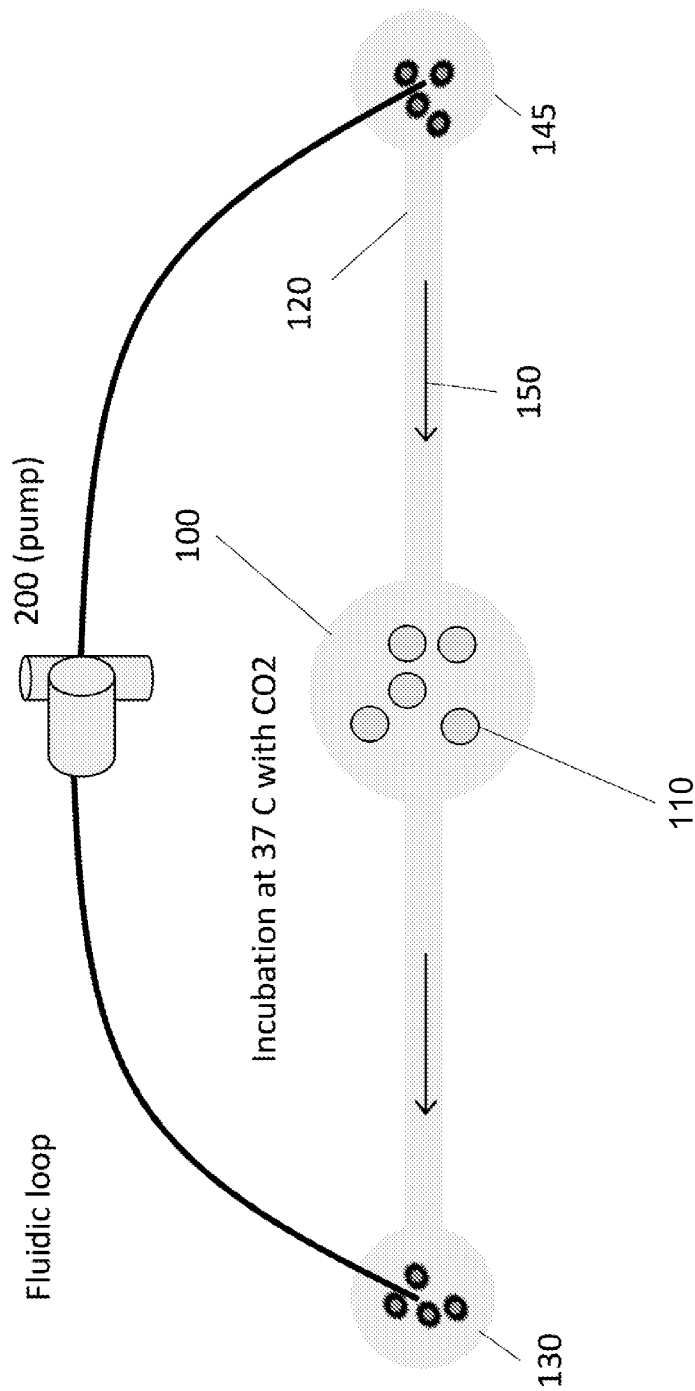


FIG. 2

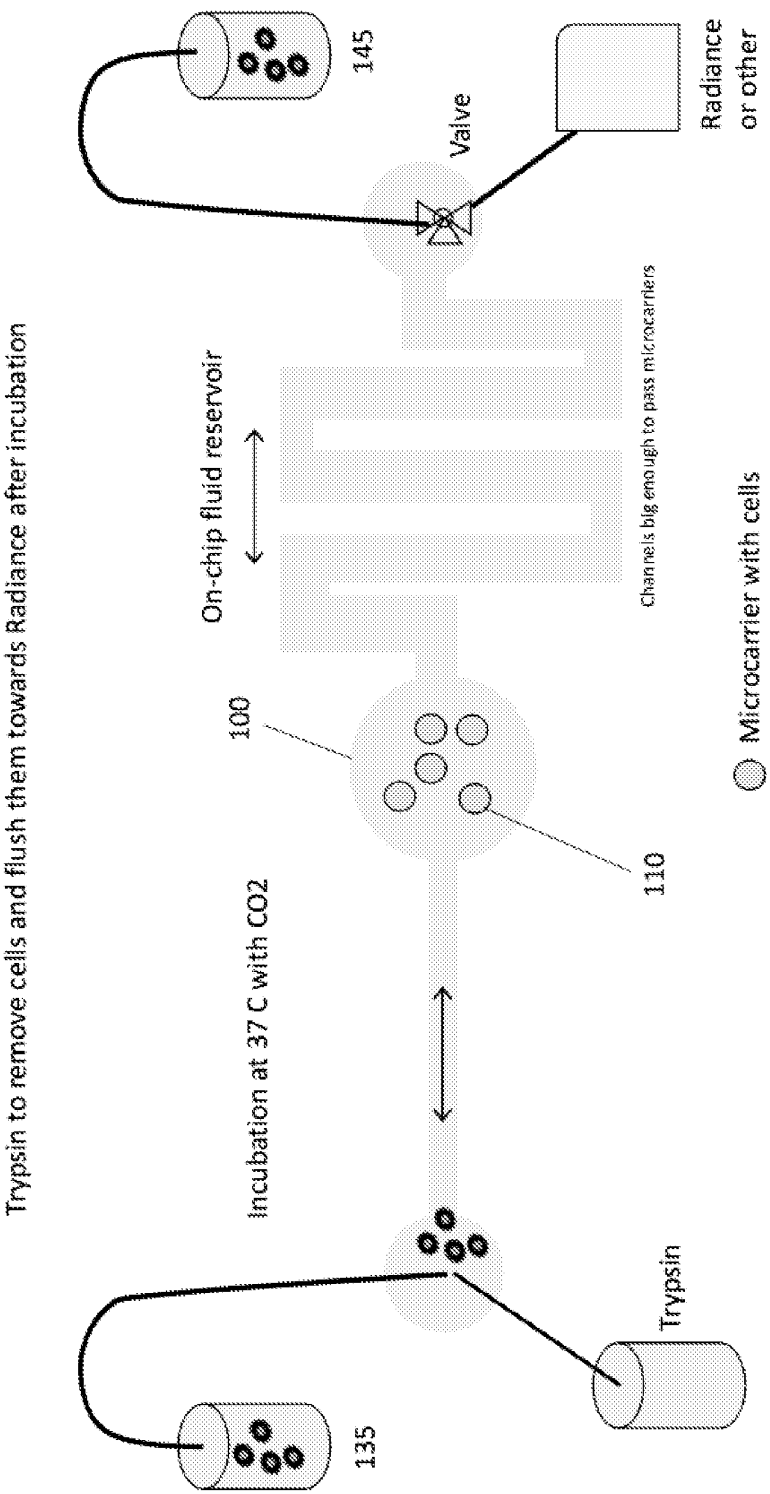


FIG. 3

redundant/manifold channel feeding 1 central cell region

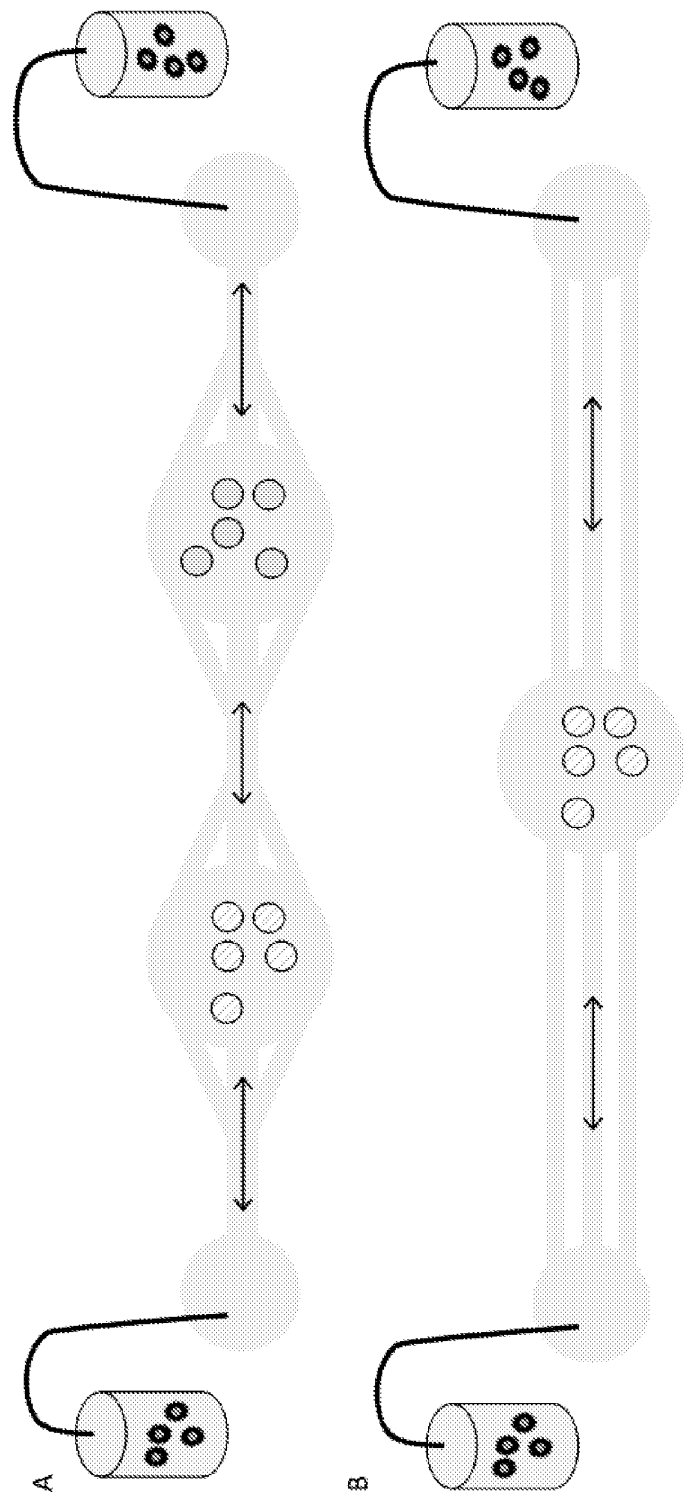


FIG. 4

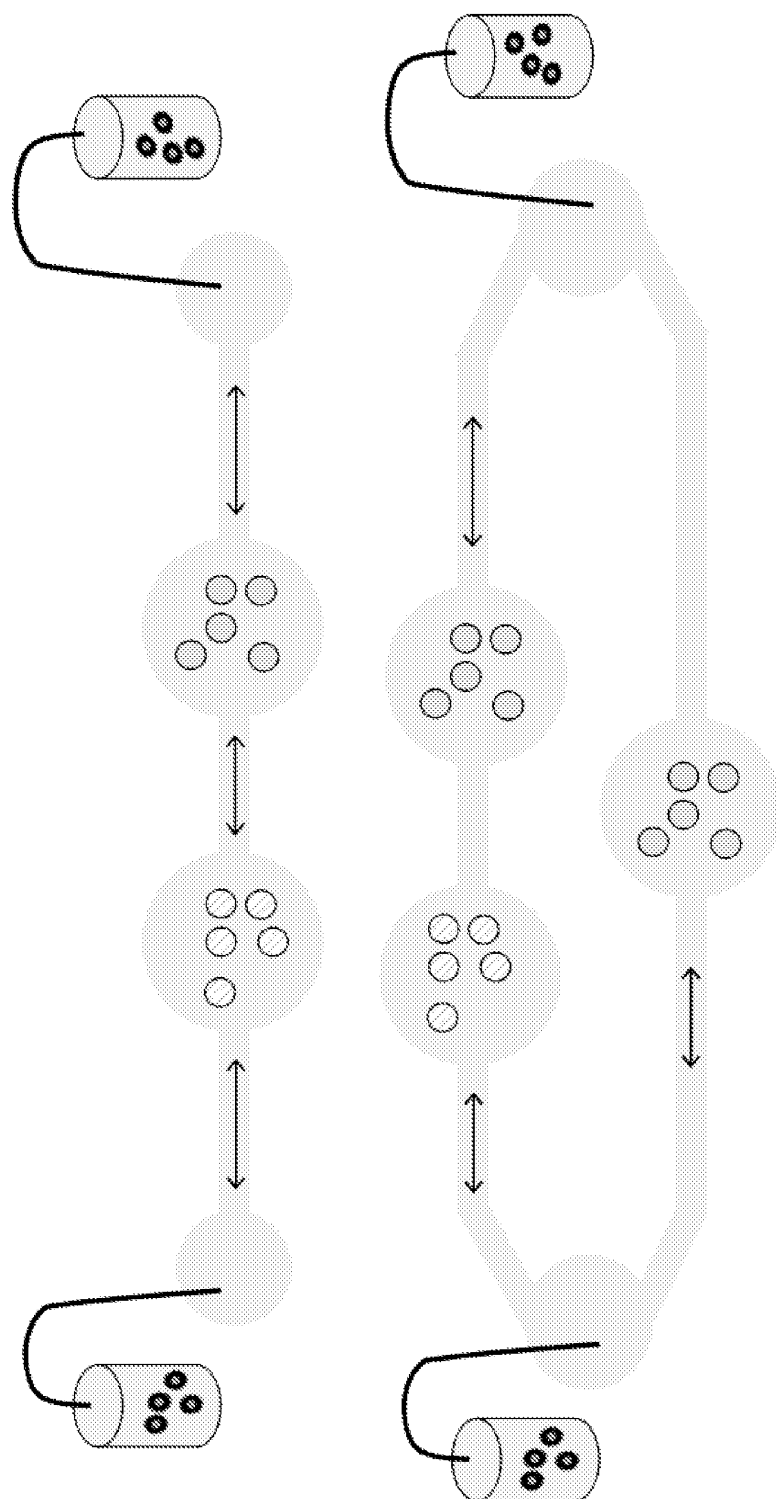


FIG. 5

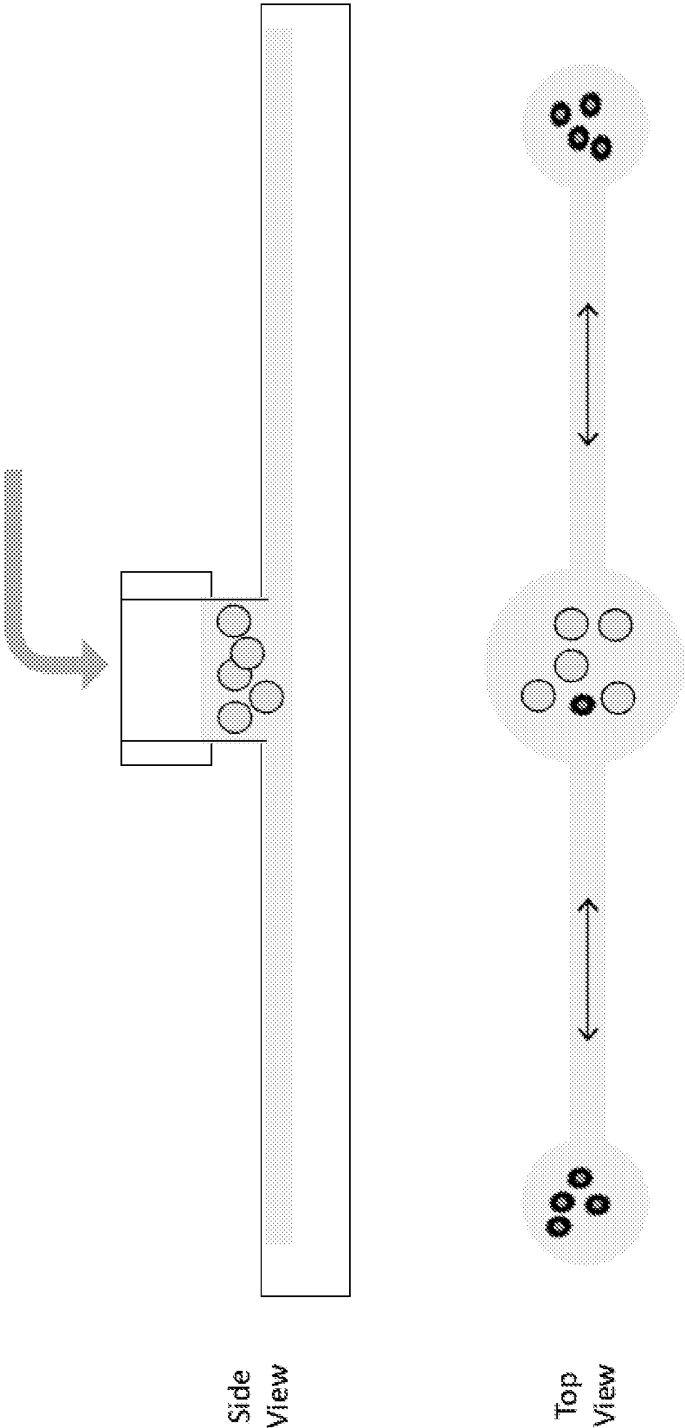


FIG. 6

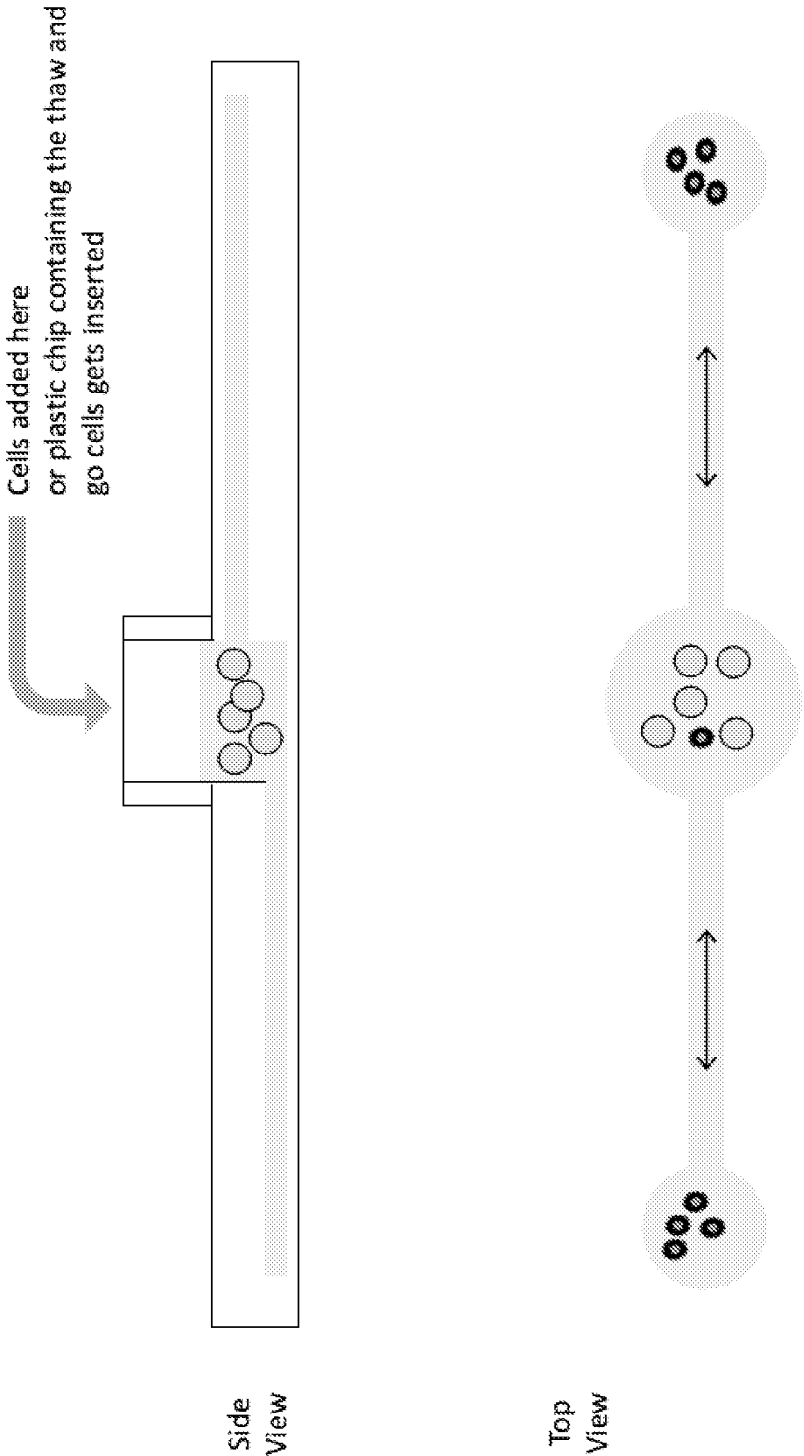


FIG. 7

Disposable plastic plug that fits into microfluidic device to present cells to CM
Porous support bottom for cells to grow but allow media to pass through them
Including areas for fluid to flow and cells not to grow (spikes?)

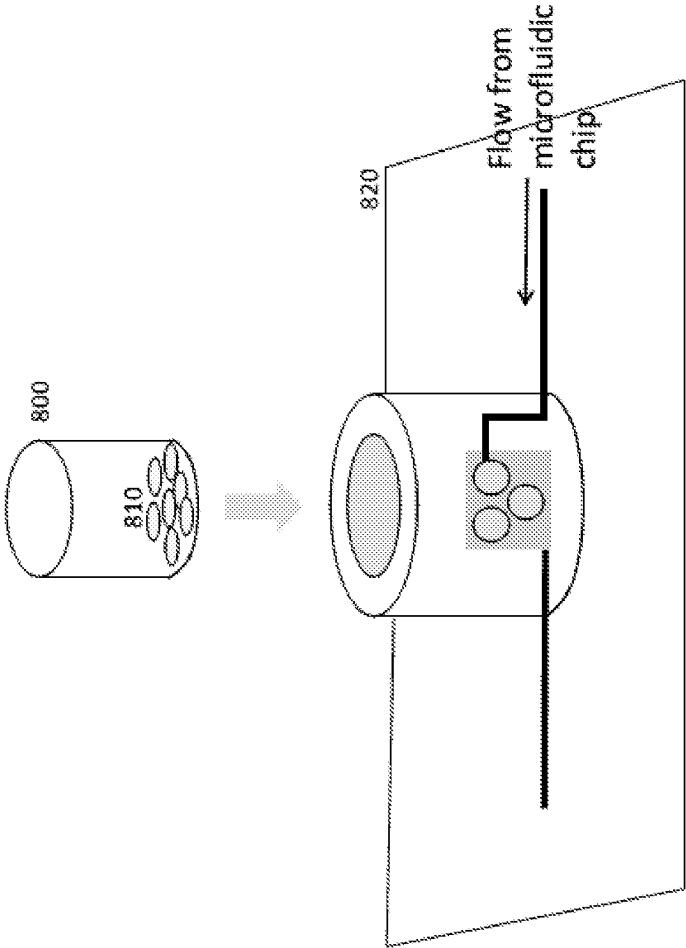


FIG. 8

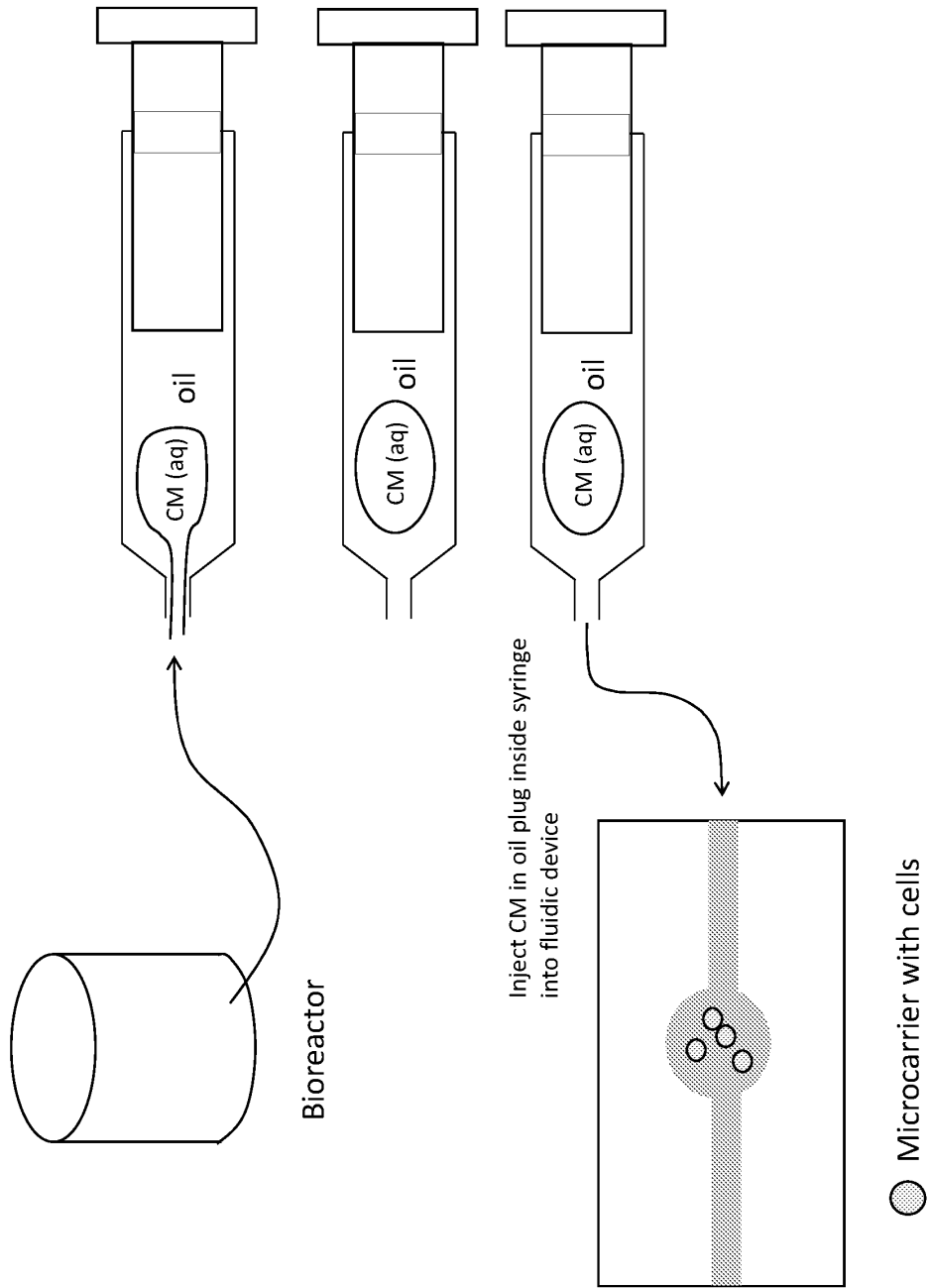


FIG. 9

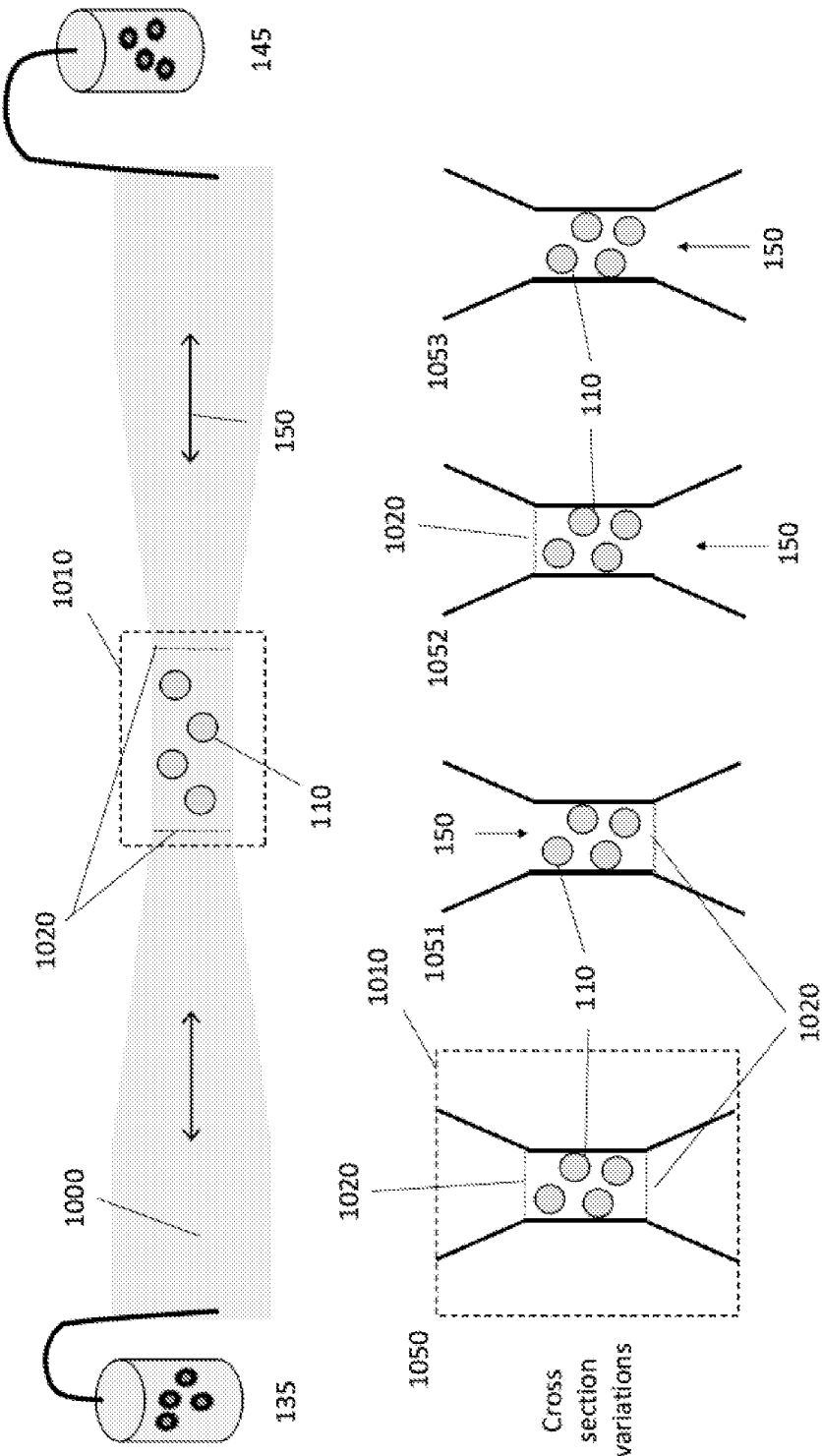


FIG. 10

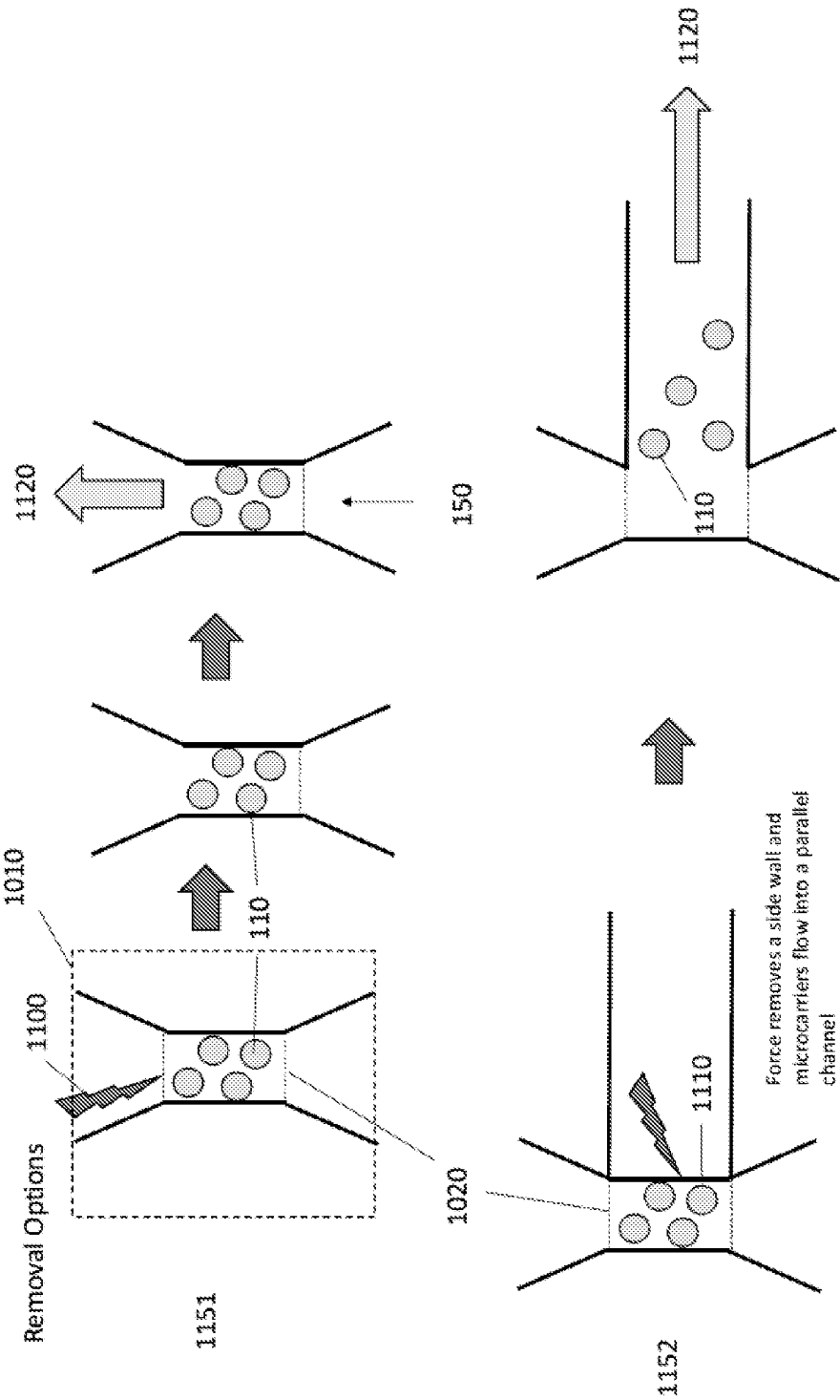


FIG. 11A

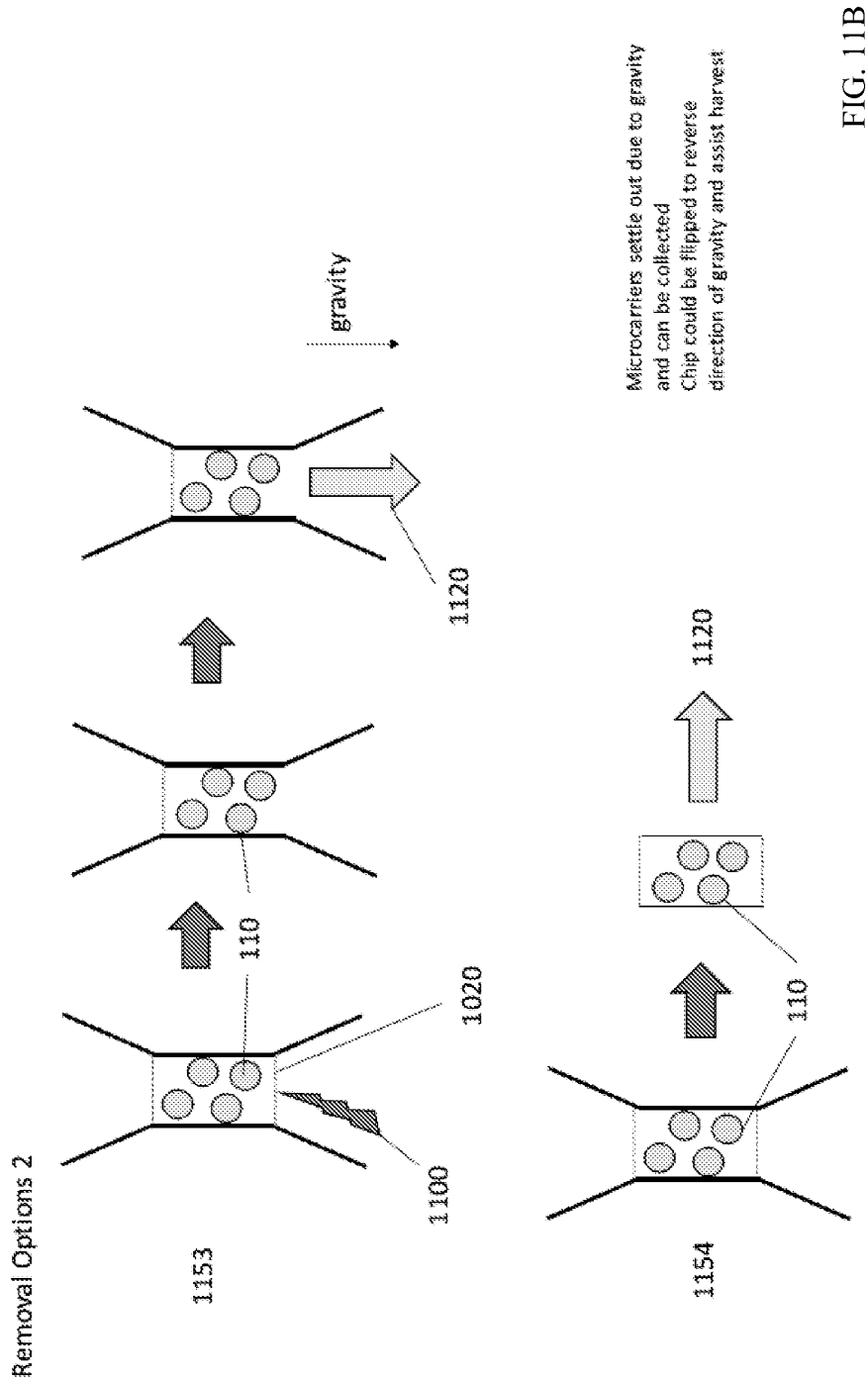
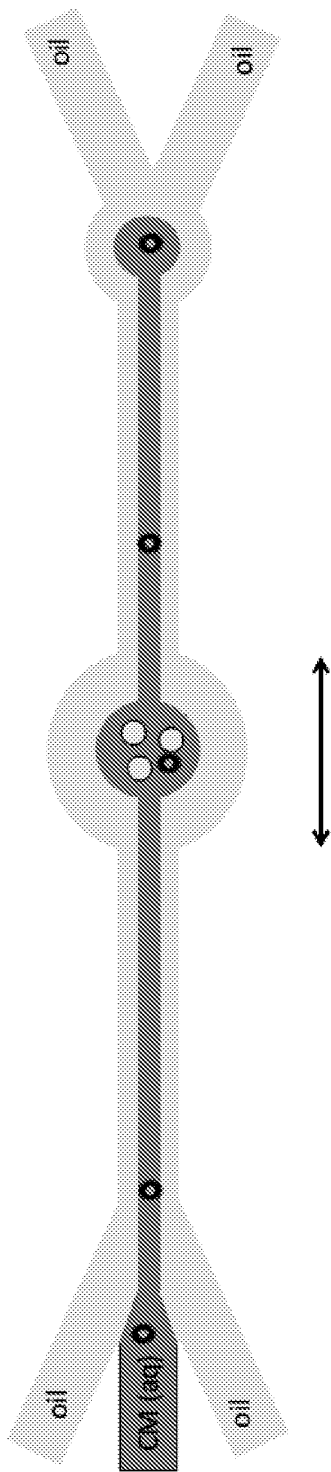


FIG. 11B



Aqueous phase contained in central region with sheath flow around it in 3 dimensions
Central regions with microcarriers for exposure

FIG. 13