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Microfluidic 3D cell culture for high throughput screening

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Microfluidic 3D cell culture for high throughput screening

1. For new technologies to gain acceptance, their development needs to focus on the end-user rather than complexity. (this thesis)
2. The angle between a phaseguide and wall can be used to tune phaseguide stability and to route liquids. (this thesis)
3. Phaseguides can be used to pattern gels and liquids to allow the formation of perfuseable, ECM embedded microtissues. (this thesis)
4. Using an industry standard format, and gravity driven perfusion flow enables the generation of high numbers of perfusable 3D tissues that can be interrogated in parallel. (this thesis)
5. Innovations both in sample handling and imaging techniques are fundamental in order to fully exploit the benefits of the third dimension in the life sciences. (Pampaloni, 2007)
6. When drug candidates are being tested using cell-based assays, the culture methods used should mimic the most natural in vivo representative form possible. (Breslin, 2013)
7. Cellular and tissue architecture can act as the most dominant tumor-suppressor of all, and the phenotype can override the genotype as long as the tissue architecture is maintained. (Weaver, 1997)
8. Research can be like shooting an arrow, walking to where it landed, and drawing a bullseye around it.
9. If all you have is a hammer, everything looks like a nail. (Abraham Maslow)
10. Excessive focus on individual performance undermines the collaborative effort needed for scientific progress.
11. Everything should be made as simple as possible, but not simpler. (Albert Einstein)