



MSc - Thesis:

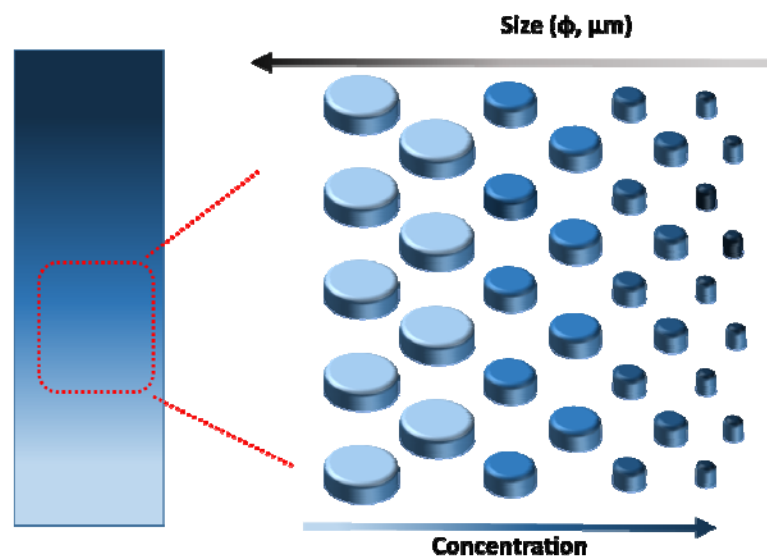
**Fabrication and characterization of  $\mu$ -structured bioactive surfaces based on chemical gradients for cell adhesion studies**

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Chemical gradient surfaces are surfaces with a gradually changing chemistry along their length. These gradients induce a position-dependent variation in either physical properties (i. e. wettability) or interaction affinity, when the grafted molecules promote further bonding processes (i. e. integrin/ECM recognition).

Such an approach has been extensively used in the field of biomaterials, as a useful tool to analyze interactions between biological species and surfaces in a single experiment on one surface. In addition, this technique has also been employed in terms of cell proliferation and enhanced directional migration. In this context, the project aims to combine such type of chemical treatments together with micro-structuring techniques (i.e.  $\mu$ -contact printing), in order to build a new range of interfaces on which different physico-chemical parameters can be tuned on demand. Such **novel interfaces** will be used, in the first run, **to study cell adhesion and cell proliferation**.

If you are curious about science, if you are a motivated student, if you want to learn new concepts and novel experimental techniques, then you are welcome to join our team!



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