

SÉMINAIRE DE L'AXE FORMULATION ET ANALYSE DU MÉDICAMENT

Goodbye Hospitals: Hello Implantable Nano-Sensors



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à l'invitation du professeur Davide Brambilla

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There is an acute shortage of organs due to disease, trauma, congenital defect, and most importantly, age related maladies. Cancer also continues to be a prominent healthcare problem. While tissue engineering (and nanotechnology) has made great strides towards improving treating cancer, tissue growth, infection control has been largely forgotten – which critically increases for cancer patients. As a consequence, the Centers for Disease Control have predicted more deaths from antibiotic-resistant bacteria than all cancers combined by 2050. This talk will summarize how nanotechnology can be used to treat cancer, increase tissue growth and decrease implant infection without using antibiotics but using sensors (while obtaining regulatory approval). Our group has shown that nanofeatures, nano-modifications, nanoparticles, and most importantly, nanosensors can improve all aspects of medicine. This talk will summarize techniques and efforts to create nanosensors for a wide range of medical and tissue engineering applications, particularly those that have received FDA approval and are currently being implanted in humans.