

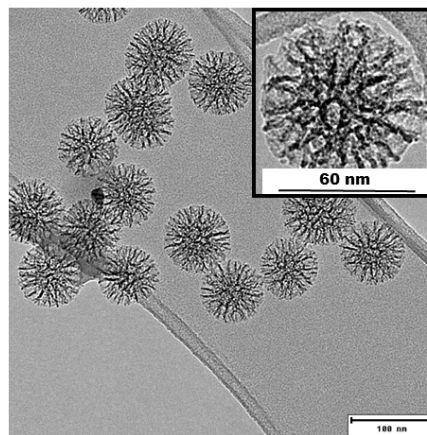
Aptamers-functionalized large pore mesoporous silica nanoparticles for targeted enzyme delivery

Cadre général :

Mesoporous silica nanoparticles (MSNs) have known a tremendous development over the past ten years as vectors for drug delivery. Indeed, they feature a tunable size and very high porosity allowing the loading of a large amount of drugs. Moreover, they have a rigid structure and can be easily functionalized. However, the loading of proteins or peptides has been scarcely investigated, as large pores MSNs have been much less studied.

Sujet exact, moyens disponibles :

In this project, we want to develop large pores MSNs (100 nm in diameter, pores of 4 to 10 nm) functionalized with DNA aptamers in order to encapsulate and deliver on command proteins or peptides. The research will be performed in close collaboration between Institut Néel (X Cattoën) and the Département de Pharmacochimie Moléculaire (F Oukacine).



Interactions et collaborations éventuelles :

**This Master internship could be followed into a PhD within the same research area:
Possible, depending on funding**

Formation / Compétences :

Chemical synthesis; materials characterization; knowledge in biomolecules would be welcome.

Période envisagée pour le début du stage : february 2020-july 2020

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