



## BIOSENSORS / MAGNETIC NANOPARTICLES / BIOMATERIALS

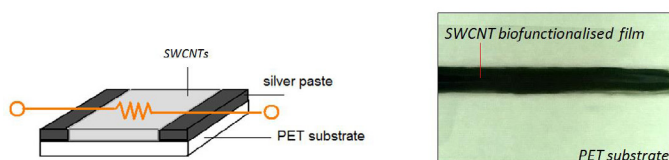
### Short Description

A. An immune-biosensor has been constructed for the determination of Glial Fibrillary Acidic Protein (GFAP) levels, based on single-wall carbon nanotubes (SWCNTs), to which an antibody against GFAP is covalently bound. The sensor has a specificity of up to a few  $\mu\text{g/mL}$ , as proven by measurements in various concentrations of GFAP standard solutions and a 100  $\mu\text{g/mL}$  BSA solution.

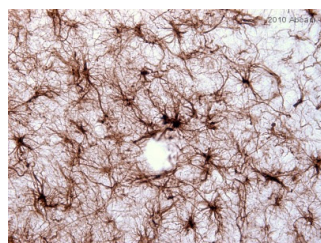
B. Design, synthesis, characterization and toxicity, anti-inflammatory and anti-oxidant effect studies of hybrid metallo-flavonoid complexes, encapsulated in surface-modified magnetic dendrimer nanocarriers, targeting neuroprotective pharmaceutical nanobiotechnology.

### Application Field

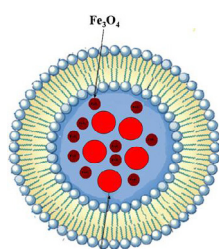
Sensors  
Diagnostics  
Pharmaceuticals  
Nutrition



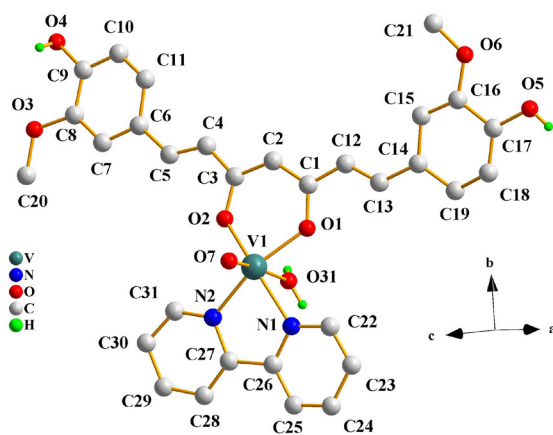
Immune sensor schematic (left) and substrate picture (right)



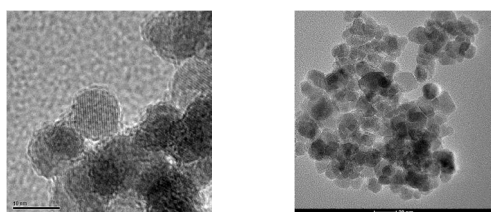
Microscopy image of GFAP neuron staining



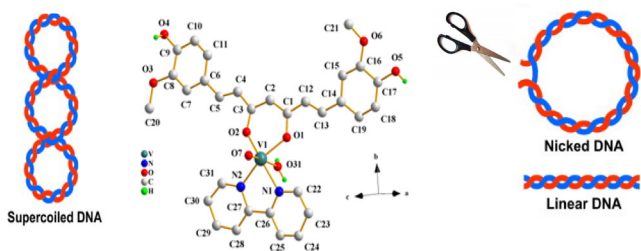
Metallo-flavonoid complex  
Magnetic liposome encapsulating metallo-flavonoid complex particles



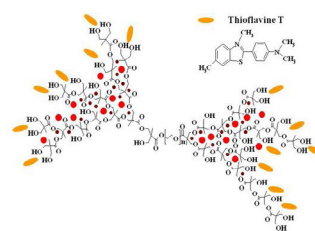
Crystal structure of vanadium-flavonoid complex



HRTEM image of magnetic nanoparticles



Magnetic dendrimer encapsulating metallo-flavonoid complex particles, with ThT surface functionalizations



Complex (vanadium-flavonoid)-induced supercoiled DNA chain disruption

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