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CNT Mitoprotective activity in mitochondrial swelling

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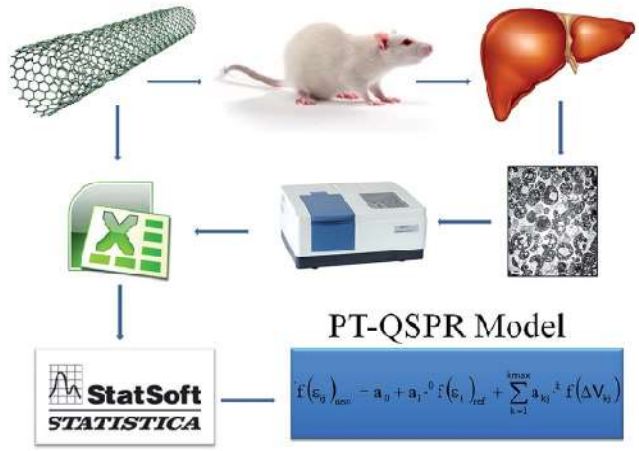

Abstract. We used different experimental protocols to determine the mitoprotective activity (%P) of different carbon nanotubes (CNT) against mitochondrial swelling. The experimental conditions were combinations of the following factors: different mitochondrial swelling assays using the MPT-inductor (Ca2+, Fe3+, H2O2) combined or not with a second MPT-inductor and swelling control assays using MPT-inhibitor (CsA, RR, EGTA), exposure time (0–600 s), and CNT concentrations (0–5 mg ml1). Other factors changed were the CNT structural parameters CNT type (SW, SW + DW, MW), CNT functionalization type (H, OH, COOH). We also changed different physico-chemical properties of CNT properties like molecular weight/functionalization ratio (minW/maxW) or maximal and minimal diameter (Dmin/Dmax).

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