Praziquantel (PZQ) is a drug active against all species of Schistosoma and it is the drug of choice for the treatment of schistosomiasis [1]. Due to its low water solubility and risk of parasite resistance or tolerance to PZQ, it would be useful to develop a novel pharmaceutical product that could increase its therapeutic efficacy and improve the bioavailability. Solid lipid nanoparticles (SLN) combine the advantages of different colloidal carriers and also avoid some of their disadvantages in relation to the stability and possibility of large scale production. Thus, the aim of this work was to develop SLN containing PZQ (SLN-PZQ) and evaluate the cytotoxicity in the HepG2 cell line. The SLN were produced by a modified of the oil-in-water microemulsion method [2] using stearic acid as lipid core and poloxamer 188 as surfactant. The PZQ was incorporated in lipid core for the production of SLN-PZQ. Particle size was measured by dynamic light scattering (DLS) and the electrophoretic mobility was measured by laser Doppler anemometry. The cytotoxicity of PZQ (dissolved in ethanol) and SLN-PZQ was examined in the HepG2 cell line using AlamarBlue assay [3]. The prepared SLN-PZQ had a mean particle size of 480.4 nm with a zeta potential of $-36.5 \text{mV}$. In HepG2 cell cultures, the tested SLN-PZQ suggested a decreased toxicity of the drug when delivered by SLN, in comparison to a conventional PZQ solution of similar concentration. The degree of toxicity was shown to be dose-dependent.

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