Editorial

Trojan horse, nanomedicine and oncology

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Our world is increasingly miniaturized. Nanotechnology helps this goal. The advancement of nanoscience is undeniable and there is talk that nanoscience will be the second industrial revolution. One of these resources is nanodrugs. These are nanoparticles that carry drugs to specific target cells. Research in this area is of special interest in oncology.

Nanodrug is designed as an element that must have as properties:

I. Affect solely to the target cell in this case neoplastic cells,

II. Not affect or destroy healthy cells,

III. Not immunologically reactive therefore not arouse an immune reaction against nanoparticles.

Figure 1 Trojan horse.

Once the nanodrug comes to cancer cell, it is able to release its contents and meet the objective of destroying the tumor cell, although the theory is simple. Nanodrugs must overcome complex difficulties. First of all must be transported through the blood stream, they circumvent hepatic metabolism and renal excretion, as well as being "silent immune" and finally break through to the neoplastic cell to deposit their contents and destroy the tumor cell and no another. The idea is basically the Trojan horse (Figure 1). A structure apparently without destructive capacity, its interior contains the components necessary to do otherwise. Destroy a target. Doing it stealthily and unexpected. What it is clear that the oncology will not be equal when nanodrugs more frequent, yet, we finish building this Trojan horse.

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Conflicts of interest

Author declares there are no conflicts of interest.