CELL-BASED ASSAY
Clonogenic assay

Chemotherapy with cytotoxic drugs is the main treatment modality for certain types of cancer. Clonogenic assay (or colony formation assay) is an *in vitro* cell survival assay based on the ability of a single cell to grow into a colony. The assay can be used to determine the effectiveness of cytotoxic agents when the tumor cells are arranged in colonies or clones[1].

Test system: A-375 (human melanoma) - ATCC®.
Experimental number: Three wells per group in triplicate.
Reference Item: Cisplatin.

Main Read-outs: Colonies counted after staining.

Validation Data

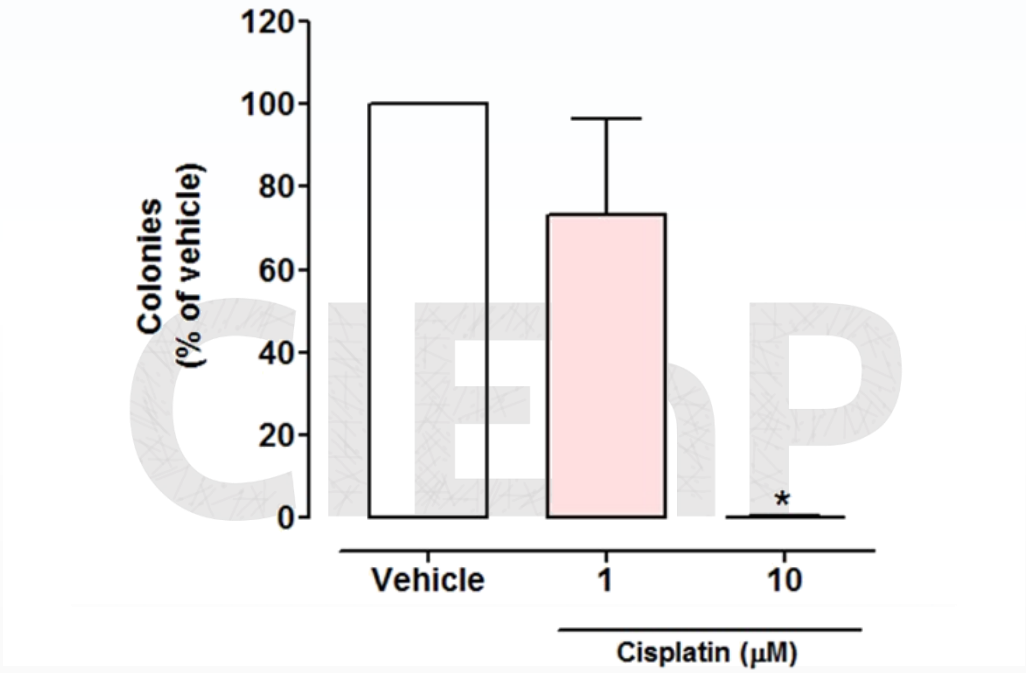

Figure: Evaluation of antitumoral cisplatin activity on cell colony development in the clonogenic assay. The figure represents the number of colonies of cisplatin in two concentrations when compared with control group (vehicle). Each column represents the mean ± SEM of 3 wells per group in triplicate. Statistical analyses used was one-way ANOVA with a post-hoc Dunnett's. *P < 0.05 versus vehicle group.

To avoid bias and to allow reproducibility and reliability of all in vitro experiments we follow the "Guidance on Good Cell Culture Practice"[2]. All in vitro experiments are performed in triplicate wells for each condition and repeated at least three times.

References:

[1]Franken NAP; Rodermond HM; Stap J; Haveman J; van Bree C. Clonogenic assay of cells in vitro. Nature protocols. 2006, 1(5):2315-2319.
[2]Coecke S; Balls M; Bowe G; Davis J; Gstraunthaler G, Hartung T, Hay R, Merten OW, Price A, Schechtman L, Stacey G, Stokes W. Guidance on good cell culture practice: a report of the second ECVAM task force on good cell culture practice. Altern Lab Anim. 2005, 33(3):261-87.

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