Cytopathic effect in BHK 21 (C13) cells inoculated with *Leptospira interrogans* serovar Pomona isolated from a porcine abortion

BHK 21 (C13) cells inoculated with a wild strain of *Leptospira interrogans* serovar Pomona isolated from a porcine abortion exhibited cytopathic effect (CPE) consistent in degenerative morphological alterations whereas no cell changes or alterations were observed in cells infected with a non-pathogenic *Leptospira biflexa* serovar Patoc strain.

BHK 21 (C13) cells were seeded on 24 well cell culture plates containing MEM-E medium with 10% fetal bovine serum and no antibiotics; 5 x 10⁴ cells per ml were poured into each well. Cell cultures were infected with one milliliter of a suspension from each separate strain containing 1 x 10⁷ leptospires/ml. Cells were subsequently incubated at 37 °C in a 5% CO₂ atmosphere and fixed with methyl alcohol at 24 and 48 h pi. Cell morphology and leptospiral CPE were microscopically assessed in May Grünwald-Giemsa stained smears. In this study, several CPE caused by a wild strain of *L. interrogans* serovar Pomona were observed at 24 h pi: ballooning, loss of cell structure, vacuolization and lysis (Figures 1 and 2). This fact demonstrated the ability of leptospires to produce cell damage. No changes were observed in BHK 21 (C13) cells infected with a non-pathogenic *L. biflexa* serovar Patoc strain (Figure 3).

![Figure 1. BHK 21 (C13) cells inoculated with a wild type *L. interrogans* serovar Pomona. Arrows show vacuolization. May Grünwald-Giemsa. 400X](image1)

![Figure 2. BHK 21 (C13) cells inoculated with a wild type *L. interrogans* serovar Pomona. Arrow shows ballooning and loss of cell structure. May Grünwald-Giemsa. 400X](image2)

![Figure 3. BHK 21 (C13) cells inoculated with *L. biflexa* serovar Patoc. No cell changes or alterations are observed. May Grünwald-Giemsa. 400X](image3)

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