

**OP51****Effect of low power laser over cells infected by herpes simplex virus.**

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The purpose of this study was check the behavior of Vero cells infected by HSV, under low power laser action.

Doses of 4 joules and 12 joules were were applied from a 904 nm GaAs laser with 30mW out put power. Vero cells (4X10<sup>4</sup> / Wells) were infected with HSV ( 100 TCID<sub>50</sub>) and observed everyday. The irradiations were daily, for 3 successive days.

We observed a lower cytophatic effect in the irradiated cells concerning the controls, been this action more evident with 4 J.

These cells were incubated for 7 days. After this period the cells were frozen and the released viruses were inoculated in new cultures of Vero.

We observed na absence of cytophatic effect in that cells infected by viruses derived of cultures that received 12 J initially.

Low power laser over Herpes Simplex can be useful in clinical practice.

**OP52****Effects of low-intensity laser therapy on the Orthodontic movement velocity of human teeth: A clinical study.**

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Low-intensity laser therapy (LILT) has been studied in many fields of Dentistry, but, to our knowledge, it is the first time that its effects on orthodontic movement velocity in humans are investigated. In our study, eleven patients were recruited for a two-month study. One half of the upper arcade was considered control group and received mechanical activation of the canine teeth every thirty days. The opposite half received the same mechanical activation and was also irradiated with a diode laser (?=780nm) on ten points around the root, during 10s with 20 mW, 5 J/cm<sup>2</sup>, on four days of each month. Data of the biometrical progress of both groups were statistically compared. All patients showed significant higher retraction velocity of the canines on the laser treated side when compared to the control. Conclusion: Our findings suggest that LILT does accelerate

human teeth movement and could therefore considerably shorten the whole treatment duration.

**OP53****Bacterial reduction by photodynamic therapy in peri-implantitis. An in vivo study.**

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Progressive peri-implantar bone losses, which are accompanied by inflammatory process in the soft tissues is referred to as peri-implantitis. The aim of this study was to compare the effects of lethal phototosensitization with the conventional technique on bacterial reduction in ligature induced peri-implantitis in dogs. Seventeen third premolars of eight Labrador dogs were extracted and, immediately after, the implants were submerged. After osseointegration, peri-implantitis was induced. After 4 months, ligature were removed and the same period was waited for natural induction of bacterial plaque. The dogs were randomly divided into two groups. In the conventional group, they were treated with the conventional techniques of mucoperiosteal flaps for scaling the implant surface and irrigation with chlorexidine. In the laser group, only mucoperiosteal scaling was carried out before photodynamic therapy. On the peri-implantar pocket an azulene paste was introduced and a GaAlAs low-power laser (l= 660 nm, P= 30 mW, E= 5,4 J and Dt= 3 min.) was applied. Microbiological samples were obtained before and immediately after treatment. The results of this study showed that *Prevotella* sp., *Fusobacterium* e *S. Beta-haemolyticus* were significantly reduced for the conventional and laser groups (100%,99.8%; 100%,100%; 85.7%,97.6%, respectively).

**OP54****Photodynamic action of toluidine blue in streptococcus mutans by fluorescence spectroscopy.**

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The antimicrobial activity of toluidine blue associated with red light has been demonstrated for a wide range of microorganisms including those commonly found in infected root canals, carious