

## Chemotactic activity of human neutrophils to streptococcus mutans

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### Abstrak

**Objective:** The aim of this study was to evaluate chemotactic activity of neutrophil to *S. mutans*. Chemotaxis assay was performed in blind well chambers. **Materials & methods:** Hanks balanced salt solution (HBSS) containing 10<sup>6</sup> *S. mutans*, 10<sup>8</sup> *S. mutans*, 10<sup>-8</sup> M fMLP, or HBSS alone were placed in the lower wells of the chamber and covered with polycarbonate membrane filter. Neutrophils suspension (2X10<sup>5</sup> cells) was then placed in the upper compartment. After incubation for 60 mins at 37°C in a humidified atmosphere with 5% CO<sub>2</sub>, the filters were removed and stained with Giemsa. **Result:** ANOVA revealed statistically significant differences among groups ( $p < 0.05$ ), indicating that *S. mutans* induced neutrophils chemotaxis. The number of neutrophils migration in response to 10<sup>8</sup> *S. mutans* and 10<sup>6</sup> *S. mutans* were significantly greater compared to fMLP ( $p < 0.05$ ). **Conclusion:** *S. mutans* may activate human neutrophils, resulting in the chemotaxis of the neutrophils.