

## Third World Congress of the International Academy of Oral Oncology (IAOO)

### ABSTRACT SUBMISSION

**Title:** The Evaluation of Hinokitiol in Oral Squamous Cell Carcinoma Prevention

**Abstract No.** 0327

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**Abstract Introduction:**

Hinokitiol is a constituent of the woody oils isolated from *Cupressaceae* heartwood. Hinokitiol had been found to be act as antibacterial, antifungal, and antitumor agents. There are a few of studies about hinokitiol with oral cancer. It is interesting that wether hinokitiol has anti-oral cancer potential and how dose hinokitiol to activate the critical anti-oral cancer mechanism.

**Methods:**

The cytotoxicity of Hinokitiol was evaluated by MTT test including 5 oral squamous cell carcinoma cell lines (OSCC cell lines: HSC3, OC3, OECM-1, SAS, and SCC4), 5 normal human oral keratinocyte (NHOK from different donors), and 5 normal human oral fibroblast (NHOF from different donors). Cell cycle was analyzed by flow cytometry. The malignant phenotypes including cell colony formation, migration, invasion, were using transwell, and anchorage independent ability was using soft agar assay.

**Results:**

Hinokitiol was more cytotoxic to 5 OSCC cell lines than 5 NHOKs, and 5 NHOFs. HSC3 was the most sensitive OSCC cell line in hinokitiol treatment. The cell cycle of most cell lines in the study was arrested at G1 phase after incubating with IC50 hinokitiol concentration 24 hr. Low dosages hinokitiol (no significant cytotoxicity in MTT test) inhibited HSC3 cell colony formation, migration, and invasion ability, and SCC4 anchorage independent growth.

**Approval** Confirm

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