

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
"وَقُلْ رَبِّ زِنِّي عِلْماً"
صَلَّى اللَّهُ الْعَظِيمِ

**EFFECT OF GREEN TEA EXTRACT
(EPIGALLOCATECHIN GALLATE) ON CYCLIN D1,
FAS/APO-1/CD95 AND ULTRASTRUCTURE IN 4-
NITROQUINOLINE 1-OXIDE-INDUCED RAT TONGUE
NEOPLASM**

Thesis

*Submitted In Partial Fulfillment Of The Requirement For The
Ph.D. In Oral Biology*

By

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2009**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَمَا أُوتِيتُمْ مِنَ الْعِلْمِ إِلَّا قَلِيلًا

صَدَقَ اللَّهُ الْعَظِيمُ

ثير مستخلص الشاي الأخضر (إبيجالوكاتيكين
جاليت) على سايكليين د / - /
و على التركيب المجهرى الدقيق في ورم
- أكسيد - نيتروكينولين

رسالة مقدمة من

الطبيبة/ أميرة الهام أحمد فارس

المدرس المساعد بقسم بيولوجيا الفم

توطئة للحصول على درجة دكتوراة الفلسفة في

بيولوجيا الفم

كلية طب الفم و الأسنان

جامعة القاهرة

٢٠٠٩

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Key words: EGCG, 4-NQO, Tongue, Neoplasm, Rat, Neoplasm, Green tea, Cyclin D1, Fas, Ultrastructure.

Abstract:

Objective: The aim of the present study was to investigate the prophylactic and therapeutic effects of green tea extract (Epigallocatechin gallate) (EGCG) on 4-Nitroquinoline-1-Oxide (4-NQO)-induced tongue neoplasm in the rat through histopathological immunohistochemical and ultrastructural examinations. **Methods:** fifty adult male albino rats were used in this investigation and were classified into five groups ten rats for each. Group I was used as control, group II received 65 mg/Liter of EGCG group III received 5 mg/Liter of 4-NQO in drinking water for 30 weeks, group IV received 65 mg/Liter of EGCG and 5 mg/Liter of 4-NQO in drinking water for 30 weeks and group V received 5mg/Liter of 4-nitroquinoline 1-oxide in drinking water for 30 weeks followed by 65mg/Liter of EGCG for additional 4 weeks. **Results:** 4-NQO resulted in the formation of severe epithelial dysplasia, overexpression of cyclin D1 and down regulation of FAS expression in the induced tongue neoplasm. EGCG produced down regulation in the cyclin D1 and increase in FAS induced apoptosis in the tumor developed by 4-NQO. On the ultrastructural level 4-NQO produced elongated basal cells with increased intercellular spaces, destruction of desmosomes and discontinuity of the basal lamina, while EGCG was resulted in nearly normal basal cells with narrow intercellular spaces, desmosomal junctions between adjacent cells and a continuous basal lamina. **Conclusion:** EGCG has a prophylactic but not therapeutic effect against 4-NQO-induced rat tongue neoplasm.

Acknowledgement

*Firstly, I would like to express my deepest gratitude and thanks to **ALLAH** whose magnificent help is the first factor in our success.*

*I would like also to express my deepest thanks and appreciation to **Prof. Dr. Nahed Abd El-Salam Khalil** for her instructive leading comments, continuous encouragement and kind advice during the progress of this work.*

*My deepest feelings of appreciation and gratitude to **Prof. Dr. Amal Hasan Abd El-Rahman** for her efforts, kind suggestions and the time she spent toward the completion of this study.*

My deepest thanks to the head of the department, all staff members and colleagues in the Oral Biology Department.

Finally, I would like to express my grateful thanks and endless appreciation to my parents and my husband for understanding, love and continuous support.

To My Parents

To My Husband

And To My Lovely Son

Ibrahim

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