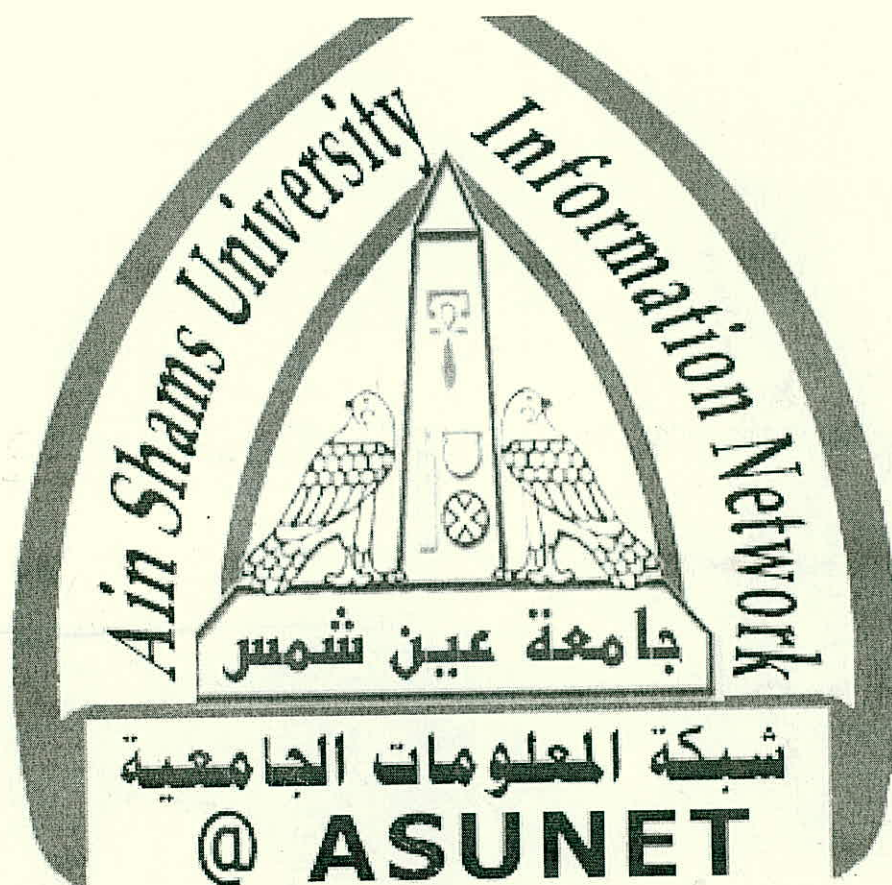




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التوثيق الالكتروني والميكرو فيلم





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بالرسالة صفحات

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# بعض الوثائق الأصلية تالفة

# **CATECHOLAMINES AND OTHER BIOCHEMICAL PARAMETERS IN NORMOTENSIVE AND HYPERTENSIVE EGYPTIANS**

*Thesis*

In partial fulfillment of  
The Master Degree of Science in Biochemistry

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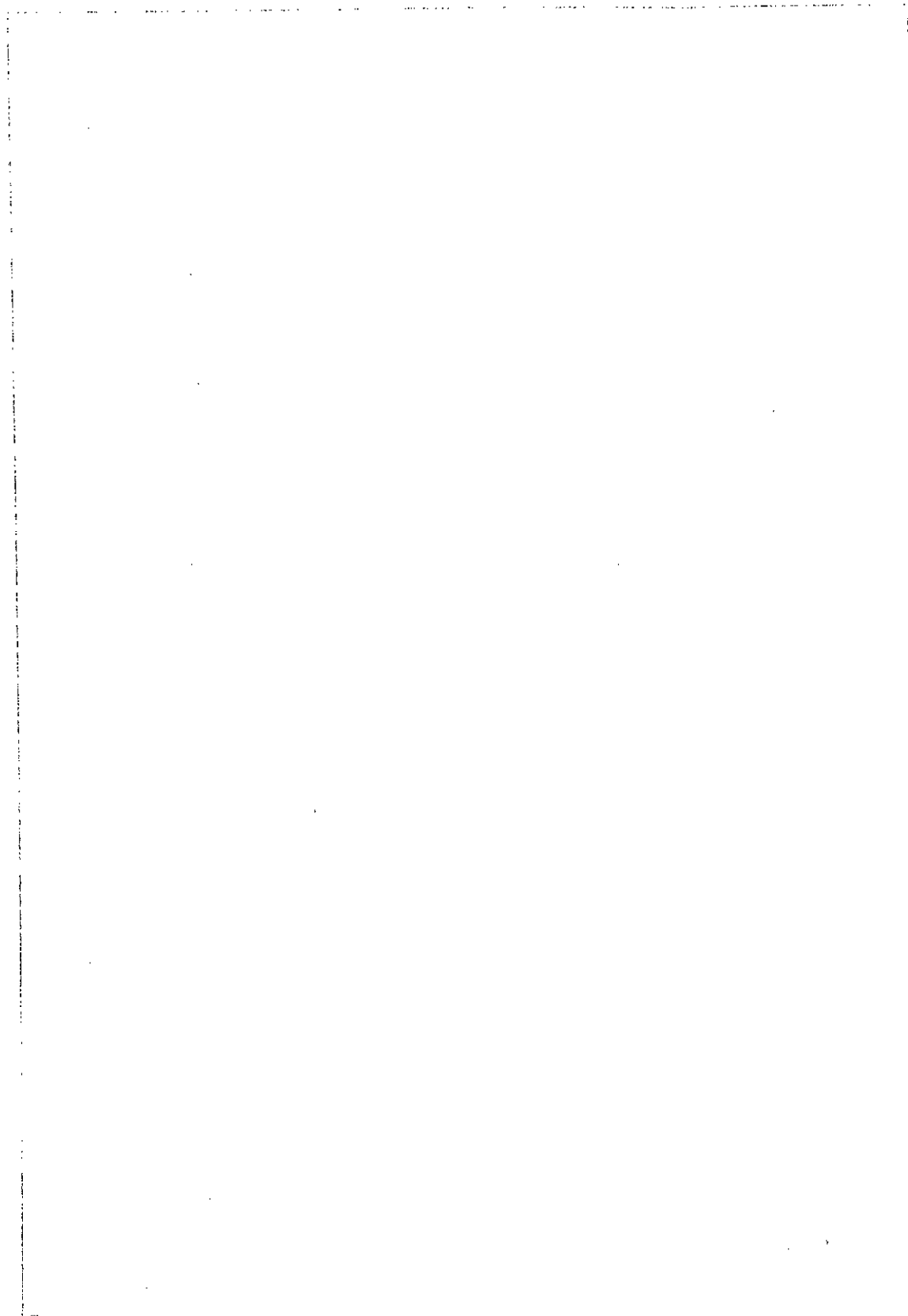
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**I declare that this thesis has been composed by myself  
and that the work of which it is a record has been done by  
myself. It has not been submitted for a degree at this or any  
other university .**

***Somaya Ahmed Hammad***



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## **Abstract**

**Catecholamines and other biochemical parameters in normotensive and hypertensive Egyptians**

**Somaya Ahmed Hammad**

Much of the published reference range data for plasma catecholamines in healthy children are incomplete and often contradictory in normotensive adults . It is also reported that hypertension is recorded in 54% and 15% in patients with phaeochromocytoma and primary hyperaldosteronism , respectively, which suggested that the diagnostic criteria need to be reevaluated . The present study was undertaken to establish the normal upper reference limit ( URL ) for resting plasma norepinephrine (NE), epinephrine (E) , plasma renin activity (PRA), serum aldosterone (Aldo) as well as the catecholamines metabolite urinary vanillyl-mandelic acid (VMA) concentrations in normal healthy subjects with variable ages ( 5-10 , 11-15 , 16-40 and 41-60 yr ) . The aim of the study is also extended to monitor the changes in the previous biochemical parameters in Egyptian hypertensives and three patients with phaeochromocytoma compared to age – matching control groups . Results obtained from this study revealed the URLs for plasma NE , E , PRA , serum Aldo and urinary VMA . The data accepted are more or less similar to previously reported values using the same methodology . In hypertensives , all the tested parameters were significantly increased . Uncomplicated essential hypertension is found to be closely associated with elevation in plasma NE than E levels especially in pubertals and adults . In phaeochromocytoma , the elevation in plasma catecholamines is more pronounced than the urinary VMA while serum Aldo and PRA are independent . In the present study , 11 statistically significant positive coefficient correlations between (SBP) or (DBP) and the different studied biochemical parameters are reported .

**Key words :** Hypertension – Phaeochromocytoma – Catecholamines – Urinary vanillylmandelic acid – Aldosterone – Plasma renin activity





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