



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكرو فيلم



MONA MAGHRABY



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التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY



Faculty of Science
Biochemistry Department
Ain Shams University



Role of Vitamin D Receptor Polymorphism in Breast Cancer

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Submitted by

Nariman Ahmed Abdelhamid

(B.Sc. Biochemistry, 2006)

Under Supervision of

Prof. Dr. Nadia Y. S. Morcos

Professor of Biochemistry

Faculty of Science, Ain Shams University

Prof. Dr. Laila A. Rashed

Professor of Medical Biochemistry

Faculty of Medicine, Cairo University

Assistant Prof. Dr. Abdel-Rahman B. Abdel-Ghaffar

Assistant Professor of Biochemistry

Faculty of Science, Ain Shams University

Faculty of Science, Ain Shams University

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Role of Vitamin D Receptor Polymorphism in Breast Cancer

ABSTRACT

Breast cancer is the most commonly diagnosed female specific cancer and shows an increasing trend in diagnosed cases. Higher vitamin D exposure is thought to prevent breast cancer through genomic effect modulated by vitamin D receptor (VDR). This study aims to investigate the association of Fok 1 polymorphism of VDR gene to breast cancer patient. Seventy-five Egyptian women diagnosed with breast cancer in stages 2,3,4 were selected. In addition, twenty-five normal women were also included in the study as control subjects. Genomic DNA was extracted from peripheral blood leukocytes using the salting out procedure. Polymerase chain reaction –restriction fragment length polymorphism (PCR-RFLP) was performed to identify the VDR genotypes of the Fok 1 polymorphism. This study provides an additional proof that Fok1 polymorphism is not associated with the risk of breast cancer but a mild shifting towards FF genotype was also found in breast cancer patients. Further studies are needed to clarify the relation between Fok 1 polymorphism and breast cancer in Egyptian women.

BIOGRAPHY

Name: Nariman Ahmed Abdelhamid

Date and place of Birth: 27/4/1985, Cairo, Egypt

Date of graduation: May, 2006

Degree awarded: B.Sc. of Biochemistry, 2006

Grade: Very good

Date of Registration: July, 2013.

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

Nariman Ahmed Abdelhamid

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالَ

سُبْحَانَكَ لَا عِلْمَ لَنَا
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْعَظِيمُ

صدق الله العظيم

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List of Abbreviations

| Abb. | Full term |
|--|---|
| <i>1,25(OH)₂D₃</i> | <i>25-hydroxyvitamin D₃</i> |
| <i>ABC</i> | <i>Abortion-breast cancer</i> |
| <i>AI</i> | <i>Adequate intake</i> |
| <i>ATG</i> | <i>A start codon</i> |
| <i>BMI</i> | <i>Body mass index</i> |
| <i>bp</i> | <i>Base pair</i> |
| <i>CA</i> | <i>Cancer antigen</i> |
| <i>CBE</i> | <i>Clinical breast examination</i> |
| <i>DBP</i> | <i>Binding protein</i> |
| <i>EB</i> | <i>Ethidium Bromide</i> |
| <i>ER</i> | <i>Estrogen receptors</i> |
| <i>ER</i> | <i>Estrogen-receptors</i> |
| <i>ER6</i> | <i>Six nucleotides</i> |
| <i>HER2</i> | <i>Human epidermal growth factor receptor 2</i> |
| <i>HRPO</i> | <i>Horseradish peroxidase</i> |
| <i>iNOS</i> | <i>Inducible nitric oxide synthase</i> |
| <i>IOM</i> | <i>Institute of Medicine</i> |
| <i>LBD</i> | <i>Ligand binding</i> |
| <i>MLL</i> | <i>Metastatic prostatic adenocarcinoma</i> <i>Dunning</i> |
| <i>MS</i> | <i>Multiple sclerosis</i> |
| <i>NADPH</i> | <i>Nicotinamide adenine dinucleotide</i> <i>phosphate</i> |
| <i>NCDs</i> | <i>Non-communicable diseases</i> |
| <i>O-CPC</i> | <i>O-Cresolphthalein complexone</i> |
| <i>PAMPs</i> | <i>Pathogen-associated molecular patterns</i> |
| <i>PCDDs</i> | <i>Polychlorinated dibenzodioxins</i> |
| <i>PCR-RFLP</i> | <i>Polymerase chain reaction-restriction</i> <i>fragment length polymorphism</i> |
| <i>PIP2</i> | <i>Phosphoinositol bisphosphate</i> |
| <i>PR</i> | <i>Progesterone receptors</i> |
| <i>PR</i> | <i>Progesterone-receptors</i> |
| <i>PTH</i> | <i>Parathyroid hormone</i> |

List of Abbreviations cont...

| Abb. | Full term |
|--------------------|--|
| <i>RFLPs</i> | <i>Restriction Fragment Length Polymorphisms</i> |
| <i>RXR</i> | <i>Retinoid X receptor</i> |
| <i>SCC</i> | <i>Squamous cell carcinoma</i> |
| <i>SNP</i> | <i>Single-nucleotide polymorphisms</i> |
| <i>TAE</i> | <i>Tris-Acetate EDTA buffer</i> |
| <i>TLRs</i> | <i>Toll-like receptors</i> |
| <i>TMB</i> | <i>Tetramethylbenzidine</i> |
| <i>UTR</i> | <i>Untranslated region</i> |
| <i>VDBP</i> | <i>Vitamin D binding protein</i> |
| <i>VDR</i> | <i>Vitamin D receptor</i> |
| <i>VDREs</i> | <i>Vitamin D responsive elements</i> |