



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكروفيلم

# بسم الله الرحمن الرحيم



**MONA MAGHRABY**



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# شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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# جامعة عين شمس

## التوثيق الإلكتروني والميكروفيلم

### قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



### يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



**MONA MAGHRABY**

# **Toll like receptor 9 (TLR 9) expression in peripheral blood mononuclear cell (PBMCs) from treated and untreated Grave's disease patients**

## *Thesis*

**Submitted for Partial Fulfilment of MD Degree  
In Internal Medicine**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا  
إلا ما علمتنا إنك أنت  
العليم العظيم

صدق الله العظيم

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## List of Abbreviations

| <i>Abbr.</i>             | <i>Full-term</i>                     |
|--------------------------|--------------------------------------|
| <b>AD</b> .....          | Autoimmune diseases                  |
| <b>AITD</b> .....        | Autoimmune thyroid disease           |
| <b>ANCA</b> .....        | Antineutrophil cytoplasmic antibody  |
| <b>ANG II</b> .....      | Angiotensin II                       |
| <b>anti-Sm/RNP</b> ..... | Anti-smith/ribonucleoprotein         |
| <b>ATDs</b> .....        | Antithyroid drugs                    |
| <b>B</b> .....           | B cell                               |
| <b>BB</b> .....          | Beta blockers                        |
| <b>CBC</b> .....         | Complete blood count                 |
| <b>CD</b> .....          | Celiac disease                       |
| <b>CMI</b> .....         | Carbimazole                          |
| <b>CpG</b> .....         | Cytosine guanine dinucleotide        |
| <b>CXCL10</b> .....      | C-X-C Motif Chemokine Ligand 10      |
| <b>CXCL8</b> .....       | C-X-C Motif Chemokine Ligand 8       |
| <b>DAMPs</b> .....       | Damage-associated molecular patterns |
| <b>DAPM</b> .....        | Danger-associated molecular pattern  |
| <b>DC</b> .....          | Dendritic cell                       |
| <b>DNA</b> .....         | Deoxyribonucleic acid                |
| <b>dsRNA</b> .....       | Double-stranded RNA                  |
| <b>ELISA</b> .....       | Enzyme-linked immunosorbent assay    |
| <b>FcγR</b> .....        | Fc region of IgG                     |



|                                       |                                       |
|---------------------------------------|---------------------------------------|
| <b>FITC</b> .....                     | Fluorescein isothiocyanate            |
| <b>GAG</b> .....                      | Glycosaminoglycans                    |
| <b>G-CSF</b> .....                    | Granulocyte-colony stimulating factor |
| <b>GD</b> .....                       | Graves' disease                       |
| <b>GDP</b> .....                      | Graves' dermopathy                    |
| <b>GH</b> .....                       | Graves' hyperthyroidism               |
| <b>GO</b> .....                       | Graves' orbitopathy                   |
| <b>HA</b> .....                       | Hyaluronic acid                       |
| <b>HAART</b> .....                    | Highly active antiretroviral therapy  |
| <b>HCQ</b> .....                      | Hydroxychloroquine                    |
| <b>HDL</b> .....                      | High-density lipoprotein              |
| <b>HE</b> .....                       | Hashimoto's encephalopathy            |
| <b>HIF-1<math>\alpha</math></b> ..... | Hypoxia-inducible factor-1 alfa       |
| <b>HIV</b> .....                      | Human immunodeficiency virus          |
| <b>HLA</b> .....                      | Human leukocyte antigen               |
| <b>HMGB1</b> .....                    | High-mobility group box1              |
| <b>HMGB1</b> .....                    | High mobility group box 1             |
| <b>HSPs</b> .....                     | Heat shock proteins                   |
| <b>HSPs</b> .....                     | Heat shock proteins                   |
| <b>HT</b> .....                       | Hashimoto's thyroiditis               |
| <b>IE</b>                             | Intestinal epithelium                 |
| <b>IFNs</b> .....                     | Interferons                           |
| <b>IGF-1R</b> .....                   | Insulin-like growth factor 1 receptor |
| <b>IL</b> .....                       | Interleukin                           |
| <b>IPT</b> .....                      | Immunophenotyping                     |

|                          |   |
|--------------------------|---|
| <b>IRAK kinases</b> .... | Interleukin-1 receptor associated kinase                |
| <b>IV</b> .....          | Intra venous  |
| <b>ivGCs</b> .....       | Intravenous glucocorticoids                             |
| <b>K2-EDTA</b> .....     | Ethylene diamine tetra-acetic acid,<br>dipotassium salt |
| <b>L</b> .....           | Lung  |
| <b>LC</b> .....          | Liver cell  |
| <b>LDL</b> .....         | Low-density lipoprotein                                 |
| <b>LN</b> .....          | Lupus nephritis   |
| <b>LN</b> .....          | Lymph node  |
| <b>LPS</b> .....         | Lipopolysaccharide                                      |
| <b>Mac</b> .....         | Macrophage  |
| <b>Mc</b> .....          | Mast cell   |
| <b>MFI</b> .....         | Mean fluorescence intensity                             |
| <b>MMI</b> .....         | Methimazole   |
| <b>Mo</b> .....          | Monocyt   |
| <b>MoAb</b> .....        | Monoclonal antibody                                     |
| <b>MRP</b> .....         | Myeloid related protein                                 |
| <b>MyD88</b> .....       | Myeloid differentiation factor 88                       |
| <b>MyDC</b> .....        | Myeloid dendritic cell                                  |
| <b>N</b> .....           | Neutrophil  |
| <b>NA</b> .....          | Not available   |
| <b>NF-kappa B</b> .....  | Nuclear factor kappa B                                  |
| <b>ODN</b> .....         | Oligodeoxynucleotides                                   |
| <b>PAMPs</b> .....       | Pathogen-associated molecular patterns                  |

|                     |  |
|---------------------|--|
| <b>PB</b>           | .....Peripheral blood  |
| <b>PBMCs</b>        | .....Peripheral blood mononuclear cells                            |
| <b>PBS</b>          | .....Phosphate buffered saline                                     |
| <b>pDC</b>          | .....Plasmacytoid DC   |
| <b>PE</b>           | .....Phycoerythrin   |
| <b>Plt</b>          | .....Platelet  |
| <b>PRRs</b>         | .....Pattern recognition receptors                                 |
| <b>PTU</b>          | .....Propylthiouracyl  |
| <b>RA</b>           | .....Rheumatoid Arthritis  |
| <b>RA</b>           | .....Rheumatoid arthritis  |
| <b>RAI</b>          | .....Radio active iodine   |
| <b>RIT</b>          | .....Radioiodine therapy   |
| <b>RNA</b>          | .....Ribonucleic acid  |
| <b>R-SLEDAI</b>     | .....Renal- Systemic Lupus Erythematosus<br>Disease Activity Index |
| <b>Rx</b>           | .....Radiotherapy  |
| <b>S</b>            | .....Spleen  |
| <b>SM</b>           | .....Small molecule  |
| <b>ssRNA</b>        | .....Single-stranded RNA   |
| <b>T1DM</b>         | .....Type 1 diabetes mellitus                                      |
| <b>T3</b>           | .....Triiodothyronine  |
| <b>T4</b>           | .....Thyroxine   |
| <b>TAK1 kinases</b> | ...Transforming growth factor-beta-activated<br>kinase             |
| <b>TAO</b>          | .....Thyroid-associated orbitopathy                                |

|                                     |   |
|-------------------------------------|---|
| <b>TBAb</b> .....                   | TSH receptor blocking antibodies                      |
| <b>Tc-99m</b> .....                 | Technetium-99m  |
| <b>TED</b> .....                    | Thyroid eye disease                                   |
| <b>TFAM</b> .....                   | Mitochondrial transcription factor A                  |
| <b>Tg</b> .....                     | Thyroglobulin   |
| <b>TGF-<math>\beta</math></b> ..... | Transforming growth factor- beta                      |
| <b>TH1</b> .....                    | T-helper-1  |
| <b>TLR</b> .....                    | Toll like receptor                                    |
| <b>TNF</b> .....                    | Tumor necrosis factor                                 |
| <b>TPO</b> .....                    | Thyroid peroxidase                                    |
| <b>TRAF6</b> .....                  | Tumor necrosis factor-receptor-associated<br>factor 6 |
| <b>TSAb</b> .....                   | TSH receptor stimulating antibodies                   |
| <b>TSHR</b> .....                   | Thyroid-stimulating hormone receptor                  |
| <b>TSHR</b> .....                   | Thyrotropin receptor                                  |
| <b>TSI</b> .....                    | Thyroid stimulating immunoglobulin                    |
| <b>Tx</b> .....                     | Total thyroidectomy.                                  |
| <b>US</b> .....                     | Ultrasound  |

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