Molecular Gene Expression of MAGE-A and ICAM-1 Genes in Breast Carcinoma

Thesis

Submitted to the Medical Research Institute

Alexandria University

In partial fulfillment of the degree of

Master

In

Immunology

By

El-Sayed Shaban Abd El-Razik

Department of Immunology Medical Research Institute Alexandria University 2009

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التعبير الجينى الجزيئى لكل من جينات أنتيجينات الميلانوما و جزىء اللصق البين خلوى-١ في سرطان الثدى

رسالة مقدمة الى معهد البحوث الطبية جامعة الأسكندرية

إيفاء جزئيا للحصول على درجة

الماجستير

في

المناعة

من

السيد شعبان عبد الرازق على قسم المناعة معهد البحوث الطبية

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معهد البحوث الطبية-جامعة الإسكندرية

للحصول على درجة الماجستير في المناعة

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List Of Abbreviations

aa Amino acid

Ab Antibody

ADCC Antibody dependent cell-mediated cytotoxicity

Ag Antigen

AJCC American Joint Committee on Cancer

AM Adhesion molecules

ANOVA Analysis of variance

APC Antigen presenting cell

APS Ammonium persulfate

ATP Adenosine triphosphate

β-ME β-mercaptoethanol

BAGE B melanoma antigen

BRCA1 breast cancer gene 1

bp Base pairs

BM Bone marrow

BSA Bovine serum albumin

C Cytosine

CAM conventional chorioallantoic membrane

CD40L Co-stimulatory molecule 40 ligand

CD44 cell-surface glycoprotein involved in cell-cell interactions

cDNA complementary deoxyribonucleic acid

CDC Complement dependent cytotoxicity

CEA Carcinoembryonic antigen