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**Potential protective effects of epigallocatechin-3-gallate
against doxorubicin-induced cardiotoxicity in rats**

Thesis submitted for the fulfillment of PhD degree in Pharmaceutical Sciences
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“يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا
مِنْكُمْ وَالَّذِينَ أُوتُوا
الْعِلْمَ دَرَجَاتٍ وَاللَّهُ بِمَا
تَعْمَلُونَ خَبِيرٌ”

سورة المجادلة ١١

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List of abbreviations

<i>Adenosine tri-phosphate</i>	(ATP)
<i>Angiotensin converting enzyme</i>	(ACE)
<i>Anthracyclines</i>	(ANTs)
<i>Apoptosis inducing factor</i>	(AIF)
<i>Calcium</i>	(Ca ²⁺)
<i>Cardiovascular system</i>	(CVS)
<i>Catalase</i>	(CAT)
<i>complementary DNA</i>	(cDNA)
<i>Congestive heart failure</i>	(CHF)
<i>Creatine kinase</i>	(CK)
<i>Deoxyribonucleic acid</i>	(DNA)
<i>5,5' dithiobis-2-nitrobenzoic acid</i>	(DTNB)
<i>Doxorubicin</i>	(DOX)
<i>Electrocardiography</i>	(ECG)
<i>Endothelial nitric oxide synthase</i>	(eNOS)
<i>Epidermal growth factor receptor 2</i>	(ErbB2)
<i>Epigallocatechin-3-gallate</i>	(EGCG)
<i>Erythropoietin</i>	(EPO)
<i>Extracellular signal-regulated kinases</i>	(ERK1/2)
<i>Ferric ion</i>	(Fe ³⁺)
<i>Ferrous ion</i>	(Fe ²⁺)
<i>Glucose-6-phosphate dehydrogenase</i>	(G6PDH)
<i>Granulocyte colony stimulating factor</i>	(G-CSF)
<i>Heart rate</i>	(HR)
<i>Heat shock factor</i>	(HSF)
<i>Heat shock protein</i>	(Hsp)
<i>Hexokinase</i>	(HK)
<i>Horseradish peroxidase</i>	(HRP)
<i>Hydrogen peroxide</i>	(H ₂ O ₂)
<i>Hydroxyl radical</i>	(OH·)
<i>Immunohistochemistry</i>	(IHC)
<i>Inhibitory kappa B</i>	(IκB)
<i>International unit</i>	(IU)
<i>Intraperitoneal</i>	(i.p.)
<i>Intravenous</i>	(IV)
<i>Lactate dehydrogenase</i>	(LDH)
<i>Inducible nitric oxide synthase</i>	(iNOS)
<i>Inhibitor- κB Kinase</i>	(IKK)
<i>Malondialdehyde</i>	(MDA)

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<i>Mitogen-activated protein kinase</i>	(MAPK)
<i>7-monohydroxyethylrutoside</i>	(monoHER)
<i>Nicotinamide adenine dinucleotide phosphate</i>	(NADPH)
<i>Nitric oxide</i>	(NO)
<i>Nitric oxide synthase</i>	(NOS)
<i>Nitroblue tetrazolium</i>	(NBT)
<i>Nuclear factor kappa-B</i>	(NF- κ B)
<i>Optical density</i>	(OD)
<i>Oxygen</i>	(O ₂)
<i>Phenazine methosulphate</i>	(PMS)
<i>Phosphate buffer solution</i>	(PBS)
<i>Platelet activating factor</i>	(PAF)
<i>Potassium ion</i>	(K ⁺)
<i>Quantitative real-time Polymerase chain reaction</i>	(RT-PCR)
<i>Reactive oxygen species</i>	(ROS)
<i>Reduced glutathione</i>	(GSH)
<i>Recombinant human erythropoietin</i>	(rhEPO)
<i>Ribonucleic acid</i>	(RNA)
<i>Sodium ion</i>	(Na ⁺)
<i>Superoxide dismutase</i>	(SOD)
<i>Superoxide radical</i>	(O ₂ ^{•-})
<i>3,3',5,5' tetramethyl benzidine</i>	(TMB)
<i>Thiobarbituric acid</i>	(TBA)
<i>Thiobarbituric acid reactive species</i>	(TBARS)
<i>Thrombopoietin</i>	(TPO)
<i>Trichloroacetic acid</i>	(TCA)
<i>Tumor necrosis factor-α</i>	(TNF- α)
<i>Unit/ liter</i>	(U/L)
<i>Vascular adhesion molecules</i>	(VCAMs)
<i>Vascular smooth muscle cells</i>	(VSMCs)
<i>Xanthine oxidase</i>	(XO)

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