Women's College for Arts
Science and Education
physics Department

Effect of ionizing radiation and He-Ne laser on enhancing the growth of vascular endothelial cells on nano based scaffold

A Thesis Submitted for the partial fulfillment of
M.Sc. Degree in Biophysics
By

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(B.Sc. 2008)

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Material and Methods

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List of abbreviations

HUVECs : human umbilical vein endothelial cells

ETO : ethylene oxide

OEC : outgrowth endothelial cells

EPCs : endothelial progenitor cells

ECs : endothelial cells

He–Ne : helium–neon

LLLT : low level laser therapy

LELI : low-energy laser irradiation

PCL : polycaprolactone

PDA : poly(dopamine)

VEGF : vascular endothelial growth factor

ECM : extracellular matrix

SEM : scanning electron microscope

BSE : backscattered electrons

NO : Nitric Oxide

DMSO : Dimethylsulphoxide

TBARS : Thiobarbituric acid reactive substances

PBS	: Phosphate Buffered Saline
DNA	: deoxyribonucleic acid
NO	: nitric oxide
MDA	: malondialdehyde
ATP	: adenosine triphosphate
An.	: Analar

LIST OF FIGURES