Targeted Respiratory Tract Drug Delivery Systems

A Thesis Submitted for Partial Fulfillment of the Requirements for the Master Degree of Pharmaceutical Sciences (Pharmaceutics)

By

Roxane Abdel Gawad Moussa

Bachelor of pharmaceutical sciences, June 2008, Ain Shams University

Demonstrator, department of Pharmaceutics and Industrial pharmacy, Faculty of Pharmacy, Ain Shams University

Under the supervision of:

Prof. Dr. Nahed Daoud Mortada

Professor of Pharmaceutics and Industrial Pharmacy, Faculty of Pharmacy, Ain Shams University

Prof. Dr. Gehanne Abd El-Samie Awad

Professor of Pharmaceutics and Industrial Pharmacy, Faculty of Pharmacy, Ain Shams University

Dr. Rihab Osman Ahmed

Associate Professor of Pharmaceutics and Industrial Pharmacy, Faculty of Pharmacy, Ain Shams University

Department of Pharmaceutics and Industrial Pharmacy
Faculty of Pharmacy
Ain Shams University
Cairo
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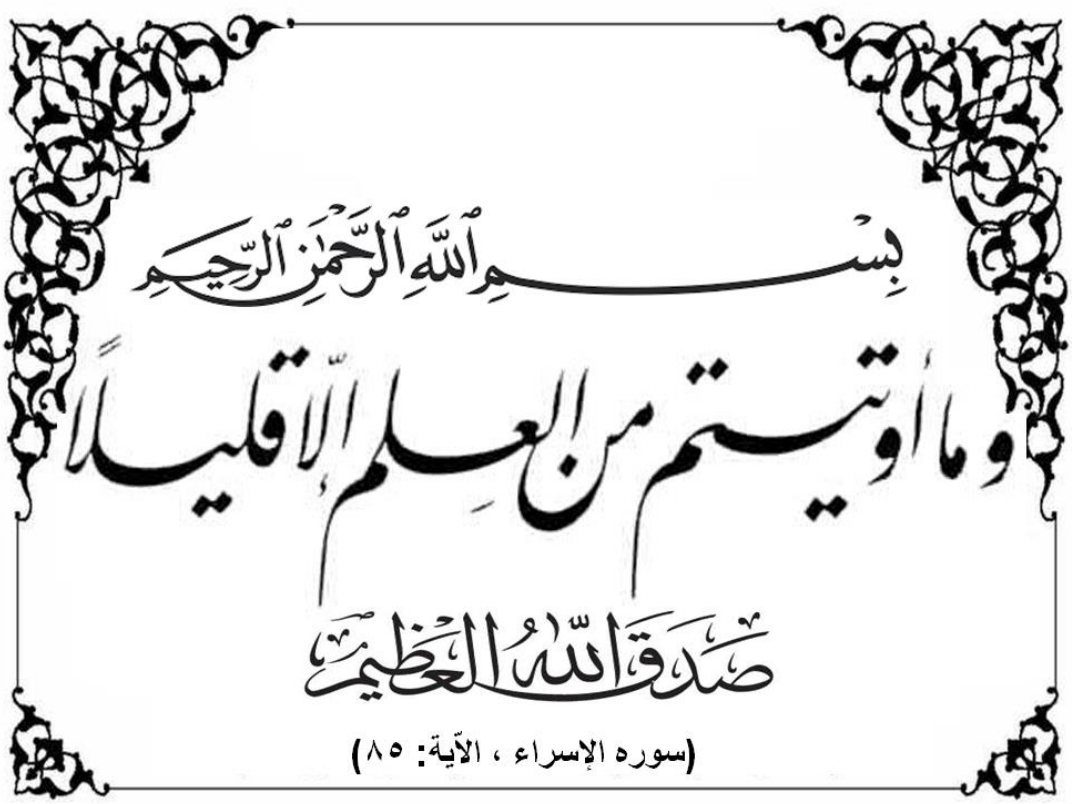
بسم الله الرحمن الرحيم
وما أوتيتم من العلم إلا قليلاً
صدق الله العظيم
(سوره الإسراء ، الآية: ٨٥)

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Roxane Abdel Gawad Moussa

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List of Abbreviations

AE	Association efficiency.
BAL	Bronchoalveolar lavage
CCI	Carr's compressibility index.
DPPC	Dipalmitoyl phosphatidyl choline.
DSC	Differential scanning calorimetry.
EA	Ethyl acetate.
ED	Emitted dose.
EE	Entrapment efficiency.
EI	Effective inhalation index.
ELF	Epithelial lining fluid.
FPD	Fine particle dose
FPF	Fine particle fraction.
FT-IR	Fourier transform- infrared.
Gp	Group.
h	Hours.
HR	Hausner's ratio.
H&E	Hematoxylin & Eosin.
IL	Interleukin.

IN	Intranasal.
IR	Infrared.
L	Leucine.
M	Mannitol.
min	Minutes.
MMAD	Mass median aerodynamic diameter.
MPs	Microparticles.
M-SA	Mannitol based soft agglomerates.
MTK	montelukast sodium.
NPs	Nanoparticles.
OVA	Ovalbumin.
OVA-SA	Ovalbumin based soft agglomerates.
PB	Phosphate buffer.
PBS	Phosphate buffer saline.
PLGA	Poly lactic glycolic acid.
PS	Particle size.
PVA	Polyvinyl alcohol.
S	Lecithin.
SA	Soft agglomerates.

sd	Standard deviation.
SD	Spray dried.
SDP	Spray dried powder.
SDPK	Montelukast loaded spray dried powder.
SE	Standard error.
SEM	Scanning electron microscopy.
TDI	Toluene di-isocyanate.
TEM	Transmission electron microscopy.
TSI	Twin stage impinger.
UV	Ultraviolet.
XRPD	X-ray powder diffraction.
ζ	Zeta potential.
θ	Angle of repose.
λ_{max}	Wavelength of maximum absorbance.

List of Tables