## **Contents**

Acknowledgements	I-V
List of Figures and Tables	VI-XII
Abbreviations	XIII-XVI
General Introduction	1-52
Material and Methods	53-81
Hypothesis and Objectives	82-84
Chapter 1: In-silico identification of Clock associated miRNAs	85-100
<b>Chapter 2:</b> Investigating miR34a-5p – Clock synergy and its	101-132
Proatherogenic implications	
Chapter 3: Expression of chronodisruptive miR34a-5p in atherosclerosis	133-163
and its regulation by carbon monoxide releasing molecule-Al	
Chapter 4a: Inhibition of miR34a-5p ameliorates KLF4 mediated	164-180
inflammatory progression in atherogenic conditions	
Chapter 4b: Alterations in miR34a-5p by CORM-A1 improves	181-208
mitochondrial biogenesis and function in atherosclerosis	
Concise Summary	209-224
Bibliography	225-239
Publications	240-249