

TABLE OF CONTENTS

Acknowledgements	iii
Abstract	x
Table of contents	xii
List of Figures	xiv
List of Tables	xxviii
Chapter 1: Introduction to membrane protein folding	1
1.1 Introduction	2
1.2 Thesis Overview	5
1.3 References	7
Chapter 2: Preparation of OmpA proteins and phospholipids vesicles	9
2.1 Introduction	10
2.2 Materials and Methods	24
2.3 Results and Discussion	30
2.4 Conclusions	38
2.5 References	39
Chapter 3: Probing folded and unfolded states of OmpA tryptophan mutants using steady-state and time-resolved tryptophan fluorescence	44
3.1 Introduction	45
3.2 Experimentals	49
3.3 Results and Discussion	53
3.4 Conclusions	65
3.5 References	99

Chapter 4: Tryptophan fluorescence quenching by brominated lipids	102
4.1 Introduction	103
4.2 Experimentals	106
4.3 Results and Discussion	106
4.4 Conclusions	119
4.5 References	120
Chapter 5: Investigations of the C-terminal domain on the refolding of OmpA tryptophan mutants using steady-state fluorescence and circular dichroism spectroscopy	121
5.1 Introduction	122
5.2 Experimentals	130
5.3 Results and Discussion	131
5.4 Conclusions	160
5.5 References	161
Chapter 6: Fluorescence energy transfer kinetics of full-length and truncated OmpA W7 mutants	163
6.1 Introduction	164
6.2 Experimentals	170
6.3 Results and Discussion	173
6.4 Conclusions	195
6.5 References	196
Chapter 7: Thesis summary and perspectives	198
References	203