

CONTENT

CONTENT	3
ABSTRACT	5
ABSTRAKT	6
ACKNOWLEDGEMENT	7
INTRODUCTION	8
1. POLYANILINE	9
1.1 Historical background	9
1.2 Chemical synthesis of polyaniline	10
1.3 Oxidation forms of polyaniline	11
1.4 Morphology of various polyaniline forms and modifications	12
1.4.1 Powders	12
1.4.2 Films	12
1.4.3 Colloid	13
1.4.4 Polyaniline modified by polymeric acids	14
1.5 Polyaniline conductivity	15
1.6 Polyaniline solubility	16
2. BIOCOMPATIBILITY	17
2.1 <i>In vitro</i> testing	19
2.1.1 Cytotoxicity	19
2.1.1.1 Cytotoxicity testing	20
2.1.2 Cell death	21
2.1.2.1 Apoptosis	21
2.1.2.2 Necrosis	22
2.2 Hemocompatibility	23
2.2.1 Blood coagulation	24

2.2.1.1 Blood coagulation pathway	27
3. ANTIBACTERIAL ACTIVITY	29
3.1 Determination of antibacterial activity.....	29
4. POLYANILINE BIOCOMPATIBILITY – STATE OF ART.....	30
5. POLYANILINE ANTIMICROBIAL ACTIVITY – STATE OF ART	32
6. AIMS OF THE DOCTORAL STUDY	33
7. SUMMARRY OF RESULTS.....	34
8. CONTRIBUTION TO THE SCIENCE	43
LIST OF FIGURES	44
LIST OF TABLES	45
LIST OF ABBREVIATIONS.....	46
REFERENCES.....	47
Curriculum vitae.....	59
Participation on projects.....	60
List of publications.....	61