

<b>ACKNOWLEDGMENTS .....</b>	<b>3</b>
<b>ABSTRACT .....</b>	<b>4</b>
<b>ABSTRAKT .....</b>	<b>4</b>
<b>TABLE OF CONTENT .....</b>	<b>5</b>
<b>LIST OF PUBLICATIONS RELATED TO THESIS .....</b>	<b>6</b>
<b>INTRODUCTION .....</b>	<b>8</b>
<b>1 BIOMATERIALS.....</b>	<b>9</b>
<b>1.1 PROPERTIES OF BIOMATERIALS.....</b>	<b>10</b>
1.1.1 MATERIAL PROPERTIES .....	10
1.1.2 BIOLOGICAL PROPERTIES – BIOCOMPATIBILITY .....	11
<b>2 BIOELECTRICITY .....</b>	<b>13</b>
<b>2.1 ELECTRICALLY CONDUCTING POLYMERS.....</b>	<b>13</b>
2.1.1 PREPARATION OF CONDUCTING POLYMERS .....	15
<b>3 CYTOCOMPATIBILITY OF CONDUCTING POLYMERS .....</b>	<b>21</b>
<b>3.1 PANI - POWDERS .....</b>	<b>21</b>
<b>3.2 PANI – COLLOIDAL DISPERSIONS.....</b>	<b>22</b>
<b>3.3 PANI – FILMS.....</b>	<b>25</b>
<b>3.4 PANI – FILMS PREPARED IN COLLOIDAL MODE .....</b>	<b>27</b>
<b>3.5 PANI AND PPY – COMPARISON OF BIOCOMPATIBILITY .....</b>	<b>28</b>
<b>4 SCAFFOLDS – PREPARATION AND CYTOCOMPATIBILITY.....</b>	<b>31</b>
<b>5 CONTRIBUTION TO SCIENCE AND PRACTICE.....</b>	<b>35</b>
<b>6 FUTURE PERSPECTIVE .....</b>	<b>38</b>
<b>LIST OF FIGURES .....</b>	<b>39</b>
<b>LIST OF TABLES.....</b>	<b>40</b>
<b>LIST OF SYMBOLS AND ABBREVIATIONS.....</b>	<b>41</b>
<b>REFERENCES .....</b>	<b>42</b>
<b>CURRICULUM VITAE.....</b>	<b>48</b>