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# ***Nanoparticles for Brain Targeting***

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## **LIST OF CONTENTS**

	<b>Page</b>
<b>List of Abbreviations</b>	<b>VII</b>
<b>List of Tables</b>	<b>XI</b>
<b>List of Figures</b>	<b>XVII</b>
<b>Abstract</b>	<b>XXIV</b>
<b>General Introduction</b>	<b>1</b>
<b>Scope of Work</b>	<b>30</b>
<b>Chapter I: Preparation, Characterization and Optimization of Oxcarbazepine-Loaded Emulsomes</b>	
<b>1. Introduction</b>	<b>32</b>
<b>2. Experimental</b>	<b>36</b>
<b>2.1. Materials</b>	<b>36</b>
<b>2.2. Equipment</b>	<b>37</b>
<b>3. Methodology</b>	<b>38</b>
3.1. U.V. scanning of OX in methanolic phosphate buffer and in 1% Triton X 100	<b>38</b>
3.2. Construction of the calibration curves and determination of the procedural constant (K) of OX in methanolic phosphate buffer and in 1% Triton X 100	<b>38</b>
3.3. Preparation of emulsomes	<b>39</b>
3.4. Evaluation of emulsomes	<b>41</b>
3.4.1. Entrapment efficiency (EE%)	<b>41</b>
3.4.2. Particle characterization	<b>41</b>
3.5. Effect of different variables on the EE%, particle size and charge of OX-emulsomes	<b>42</b>

---

3.5.1. Effect of drug concentration	42
3.5.2. Effect of total lipid amount	42
3.5.3. Effect of vesicle composition	42
3.6. <i>In vitro</i> release of OX from emulsomes	43
3.7. Effect of surface additives on the charge, size and drug release from optimized emulsomes for enhanced brain delivery	43
3.8. Transmission electron microscopy (TEM)	44
3.9. Physical stability study	44
3.10. Statistical analysis	45
<b>4. Results and Discussion</b>	<b>46</b>
4.1. U.V. scanning of OX in methanolic phosphate buffer and in 1% Triton X 100	46
4.2. Calibration curves and procedural constants (K) of OX in methanolic phosphate buffer and in 1% Triton X 100	46
4.3. Optimization of OX entrapment efficiency in emulsomes	50
4.3.1. Effect of drug concentration	50
4.3.2. Effect of total lipid amount	51
4.3.3. Effect of vesicle composition	53
4.4. Particle size analysis	59
4.5. Zeta potential	64
4.6. <i>In vitro</i> drug release	66
4.7. Evaluation of the effect of charge modifiers	69
4.8. Stability study	73
4.9. Transmission electron microscopy	76
<b>5. Conclusions</b>	<b>78</b>

---

<b>Chapter II: Preparation, Characterization and Emulsomal-Loading of Polyethylene Glycol Diacrylate (PEGDA) Cryogels</b>	
<b>1. Introduction</b>	<b>79</b>
<b>2. Experimental</b>	<b>86</b>
2.1. Materials	86
2.2. Equipment	86
<b>3. Methodology</b>	<b>87</b>
3.1. Synthesis of PEGDA cryogels	87
3.2. Emulsomal incorporation in the chosen PEGDA cryogel	90
3.3. Characterization of plain and emulsome loaded PEGDA cryogels	90
3.3.1. Characterization of plain PEGDA cryogels	90
3.3.1.1. Viscosity Measurement	90
3.3.1.2. Swelling ratio and water uptake capacity assessment	91
3.3.1.3. Cryogel mesh size determination	91
3.3.1.4. Hydrolytic degradation (HD) evaluation	93
3.3.1.5. Fourier transform infrared spectroscopy (FTIR)	94
3.3.1.6. Microstructure examination	94
3.3.1.7. Statistical and factorial analysis	95
3.3.2. Characterization of emulsome loaded cryogel	96
<b>4. Results and discussion</b>	<b>97</b>
4.1. Preparation of PEGDA cryogels	97
4.1.1. Shear rate-stress plots	98
4.1.2. Viscosity	104

---

4.1.3. Factorial analysis	115
4.1.3.1. Main effects of different factors	116
4.1.3.1.1. Effect of PEGDA monomer concentration	116
4.1.3.1.2. Effect of APS/TEMED (initiator/accelerator) concentration	117
4.1.3.1.3. Effect of freezing time	119
4.1.3.2. Interactions between factors	122
4.2. In depth characterization of selected cryogels	127
4.2.1. Fourier transform infrared spectroscopy	127
4.2.2. Swelling ratio and water uptake capacity	129
4.2.3. Network characterization	132
4.2.4. Hydrolytic degradation	136
4.2.5. Morphological analysis	138
4.3. Immobilization of OX loaded TO17-Tw emulsomes in B9 cryogel	139
4.3.1. Viscosity measurement of TO17-Tw/B9 emulsomal cryogel	140
4.3.2. <i>In vitro</i> drug release from TO17-Tw/B9 emulsomal cryogel	142
<b>5. Conclusions</b>	<b>145</b>
<b>Chapter III: Synthesis, Characterization and Emulsomal-Loading of PLGA-PEG-PLGA Thermosensitive Triblock Copolymer</b>	
<b>1. Introduction</b>	<b>146</b>
<b>2. Experimental</b>	<b>152</b>
2.1. Materials	152
2.2. Equipment	153

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<b>3. Methodology</b>	<b>154</b>
3.1. Synthesis of PLGA-PEG-PLGA triblock copolymer	154
3.2. Characterization of plain PLGA-PEG-PLGA copolymer	155
3.2.1. Nuclear magnetic resonance ( $^1\text{H}$ NMR)	155
3.2.2. Gel permeation chromatography (GPC)	156
3.2.3. Differential scanning calorimetry (DSC)	156
3.2.4. Rheological characterization	157
3.2.5. Size measurement of copolymer solution by dynamic light scattering (DLS)	158
3.3. Preparation, gelation and characterization of aqueous PLGA-PEG-PLGA thermogel solutions	159
3.3.1. Sample preparation	159
3.3.2. Macroscopic phase behaviours of aqueous polymer solutions and determination of gelation temperature	160
3.3.3. Viscosity measurement	160
3.4. <i>In vitro</i> release	161
3.5. Mucoadhesion studies	161
3.6. Statistical analysis	162
<b>4. Results and Discussion</b>	<b>163</b>
4.1. Preparation and characterization of PLGA-PEG-PLGA triblock copolymers	163
4.1.1. Nuclear magnetic resonance (NMR)	164
4.1.2. Gel permeation chromatography (GPC)	167
4.1.3. Differential scanning calorimetry (DSC)	170
4.1.4. Rheology	171
4.1.5. Dynamic light scattering (DLS)	176

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4.2. Preparation and characterization of plain and TO17-Tw emulsome-loaded PLGA-PEG-PLGA thermogel solutions	178
4.2.1. Thermogelation of the copolymer solutions	178
4.2.2. Viscosity measurement	184
4.3. <i>In vitro</i> release study	189
4.4. Mucoadhesion study	191
<b>5. Conclusions</b>	<b>195</b>
<b>Chapter IV: <i>In vivo</i> Studies on Oxcarbazepine-Loaded Emulsomes and Emulsomal Gels</b>	
<b>1. Introduction</b>	<b>197</b>
<b>2. Experimental</b>	<b>199</b>
2.1. Materials	199
2.2. Animals	199
2.3. Equipment	200
<b>3. Methodology</b>	<b>201</b>
3.1. Cytotoxicity study	201
3.2. Histopathological study	202
3.3. Pharmacokinetic study	203
3.3.1. Administration of the formulations to rats	203
3.3.2. Assay of oxcarbazepine content in plasma and brain samples	204
3.3.2.1. Chromatographic conditions	204
3.3.2.2. Method validation	205
3.3.3. Pharmacokinetic analysis	207
3.3.4. Evaluation of brain targeting efficiency	208
<b>4. Results and discussion</b>	<b>209</b>
4.1. Nasal tolerability studies	209

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4.1.1. Cytotoxicity study	<b>209</b>
4.1.2. Histopathological examination	<b>210</b>
4.2. Pharmacokinetic study	<b>215</b>
4.2.1. Validation of OX LC/MS-MS assay method	<b>215</b>
4.2.2. Plasma pharmacokinetic parameters	<b>222</b>
4.2.3. Brain pharmacokinetic parameters	<b>228</b>
4.2.4. Brain transport study using in vivo rat model	<b>234</b>
<b>5. Conclusions</b>	<b>238</b>
<b>Overall conclusion</b>	<b>240</b>
<b>Future perspective</b>	<b>241</b>
<b>Summary</b>	<b>242</b>
<b>References</b>	<b>254</b>
<b>Arabic Summary</b>	<b>\</b>

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## **LIST OF ABBREVIATIONS**

<b>AEDs</b>	Antiepileptic drugs
<b>APS</b>	Ammonium per sulphate
<b>AUC<sub>0-2880 min</sub></b>	Area under OX concentration-time curve up to 48 hrs
<b>BBB</b>	Blood-brain-barrier
<b>BBR</b>	Brain/blood ratio
<b>BHT</b>	Butylated hydroxy toluene
<b>C</b>	Compritol
<b>C.V. %</b>	Coefficient of variation
<b>CGT</b>	Critical gelation temperature
<b>C<sub>max</sub></b>	Peak plasma and brain concentrations
<b>CNS</b>	Central nervous system
<b>CRC</b>	Chain relaxation capability
<b>CSF</b>	Cerebrospinal fluid
<b>DLS</b>	Dynamic light scattering
<b>DMSO</b>	Dimethyl sulfoxide
<b>DOE</b>	Design of experiments
<b>DR%</b>	Drug retained percent
<b>DSC</b>	Differential scanning calorimetry
<b>DTE %</b>	Drug targeting efficiency
<b>DTI</b>	Drug targeting index
<b>DTP %</b>	Direct nose-to-brain transport percentage
<b>EE%</b>	Entrapment efficiency
<b>FDA</b>	Food and drug administration
<b>FTIR</b>	Fourier transform infrared spectroscopy
<b>G'</b>	Elastic modulus

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<b>G''</b>	Viscous modulus
<b>GPC</b>	Gel permeation chromatography
<b>HEPES</b>	Hydroxy ethyl piperazine ethane sulfonic acid
<b>HD</b>	Hydrolytic degradation
<b>IA</b>	Intra-arterial
<b>ICH</b>	The International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use
<b>IN</b>	Intranasal
<b>IS</b>	Internal standard
<b>IV</b>	Intravenous
<b>K<sub>el</sub></b>	Elimination rate constant
<b>LNPs</b>	Lipid nanoparticles
<b>M<sub>c</sub></b>	Molecular weight of the polymer chain between two neighboring cross links
<b>MEHQ</b>	Monomethyl ether hydroquinone
<b>MEM</b>	Minimum essential medium
<b>M<sub>n</sub></b>	Number average molecular weight
<b>MRM</b>	Multiple reactions monitoring
<b>MRT</b>	Mean residence time
<b>MTT</b>	3- (4, 5- dimethylthiazol-2-yl) -2, 5- diphenyl tetrazolium bromide
<b>M<sub>w</sub></b>	Weight average molecular weight
<b>NADPH</b>	Nicotinamide adenine dinucleotide phosphate
<b>NLCs</b>	Nanostructured lipid carriers
<b>NMR</b>	Nuclear magnetic resonance
<b>OX</b>	Oxcarbazepine
<b>PBS</b>	Phosphate buffer saline

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<b>PC</b>	Soya phosphatidylcholine
<b>PCL</b>	Poly caprolactone
<b>PDI</b>	Poly dispersity index
<b>PEG</b>	Polyethylene glycol
<b>PEGDA</b>	Poly ethylene glycol diacrylate
<b>PET</b>	Polyethylene terephthalate
<b>PGA</b>	Poly glycolic acid
<b>Pk</b>	Pharmacokinetic parameters
<b>PLA</b>	Poly lactic acid
<b>PLGA</b>	Poly lactide-co-glycolide
<b>PVA</b>	Poly vinyl alcohol
<b>RES</b>	Reticuloendothelial system
<b>Rpm</b>	Rotation per minute
$(r_0^2)^{1/2}$	Root-mean-square of the end-to-end distance of the polymer chain in the unperturbed state
<b>SD</b>	Standard deviation
<b>SEM</b>	Scanning electron microscopy
<b>ShR</b>	Shear rate
<b>SLNs</b>	Solid lipid nanoparticles
<b>SR</b>	Swelling ratio
<b>SS</b>	Shear stress
$t_{1/2}$	Time to reach half the maximum plasma and brain concentrations
<b>tan <math>\delta</math></b>	Phase angle
<b>TEM</b>	Transmission electron microscopy
<b>TEMED</b>	Tetra ethyl methyl ethylene diamine
<b>TG</b>	Triglyceride
<b>T<sub>max</sub></b>	Time to reach peak plasma and brain

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	concentrations
<b>TO</b>	Triolein
<b>TP</b>	Tripalmitin
<b>TS</b>	Tristearin
<b>Tw</b>	Tween 80
<b>W<sub>d</sub></b>	Weight of dry gels
<b>W<sub>s</sub></b>	Weight of swollen gels
<b>W<sub>u</sub></b>	Weight of deionized water
<b>W<sub>u</sub>%</b>	Water uptake capacity
<b>ξ</b>	Mesh size
<b>v<sub>2,r</sub></b>	polymer volume fraction in the relaxed state
<b>v<sub>2,s</sub></b>	Polymer volume fraction in the swollen state

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## LIST OF TABLES

<b>Table No.</b>	<b>Table name</b>	<b>Page</b>
<b>1</b>	Nomenclature and compositions of different OX-emulsomal formulations	<b>40</b>
<b>2</b>	Calibration curve data for OX in phosphate buffer pH 6.8 containing 5% methanol at $\lambda_{\max}$ 305 nm	<b>47</b>
<b>3</b>	Calibration curve data for OX in 1% Triton X 100 at $\lambda_{\max}$ 305 nm	<b>48</b>
<b>4</b>	The effect of drug concentration on the EE% of OX-emulsomes prepared using PC and C in a ratio of 2:1 and total lipid amount of 30 mg	<b>51</b>
<b>5</b>	Entrapment efficiency percents of different OX-emulsomal formulations	<b>58</b>
<b>6</b>	Size and poly dispersity index measurements of different OX-emulsomal formulations	<b>60</b>
<b>7</b>	Zeta potential values for different OX-emulsomal formulations	<b>65</b>
<b>8</b>	Best selected OX-emulsomal formulations with size < 200 nm and EE% > 60%	<b>66</b>
<b>9</b>	Stability study of selected OX-emulsomes during 3 months storage at refrigeration temperature	<b>74</b>
<b>10</b>	Coding, compositions and fabrication conditions of plain PEGDA cryogel	<b>88</b>
<b>11</b>	Factors and levels used in the factorially designed experiment for the preparation of plain PEGDA based cryogels	<b>96</b>

<b>12</b>	Shear stress versus shear rate of plain cryogels B9-C12, prepared from 2.5% PEGDA	<b>101</b>
<b>13</b>	Shear stress versus shear rate of plain cryogels D3-F12, prepared from 5% PEGDA	<b>102</b>
<b>14</b>	Shear stress versus shear rate of plain cryogels G3-I12, prepared from 10% PEGDA	<b>103</b>
<b>15</b>	Effect of rpm increase on the viscosities of plain cryogels frozen for different time intervals and prepared using 10% w/v PEGDA and 1 mM (a), 5 mM (b) and 10 mM (c) of APS/TEMED	<b>106</b> <b>107</b>
<b>16</b>	Effect of rpm increase on the viscosities of plain cryogels frozen for different time intervals and prepared using 5% w/v PEGDA and 1 mM (a), 5 mM (b) and 10 mM (c) of APS/TEMED	<b>109</b> <b>110</b>
<b>17</b>	Effect of rpm increase on the viscosities of plain cryogels frozen for different time intervals and prepared using 2.5% w/v PEGDA and 1 mM (a), 5 mM (b) and 10 mM (c) of APS/TEMED	<b>112</b> <b>113</b>
<b>18</b>	ANOVA table for the viscosity of plain PEGDA cryogels measured at 0.5 rpm, according to the factorial design	<b>120</b>
<b>19</b>	Main effects of different factors on the mean viscosity (measured at 0.5 rpm) of plain PEGDA cryogels	<b>121</b>
<b>20</b>	Two-way interaction results of different factors on the mean viscosity (measured at 0.5 rpm) of plain PEGDA cryogels	<b>124</b>

<b>21</b>	Three-way interaction results of different factors on the mean viscosities (measured at 0.5 rpm) of plain PEGDA cryogels	<b>125</b>
<b>22</b>	Parameters for swelling ratios and water uptake capacities of different plain cryogels containing different concentrations of PEGDA	<b>130</b>
<b>23</b>	Network structure characterization of plain cross-linked cryogels prepared with different concentrations of PEGDA	<b>135</b>
<b>24</b>	Hydrolytic degradation of plain cryogels B9, E9 and H9 expressed as % of mass loss after soaking in water for weeks	<b>137</b>
<b>25</b>	Viscosities of plain and OX-emulsome loaded B9 cryogel measured at different rpm values	<b>141</b>
<b>26</b>	Mean OX released from TO17-Tw emulsomes versus the emulsomal embedded cryogel TO17-Tw/B9	<b>143</b>
<b>27</b>	Composition of the synthesized plain PLGA-PEG-PLGA triblock copolymer	<b>155</b>
<b>28</b>	Coding and compositions of prepared PLGA-PEG-PLGA thermogels	<b>160</b>
<b>29</b>	Peak areas of prominent signals obtained from the NMR spectrum of plain PLGA-PEG-PLGA copolymer by integration of the peaks	<b>166</b>
<b>30</b>	Calculation of the number molecular weight $M_n$ of plain PLGA-PEG-PLGA polymer using $^1H$ NMR integrated signals	<b>167</b>