

## List of Figures

|                   |  |           |
|-------------------|--|-----------|
| <b>Figure 1.1</b> | The relationship between the percentages of surface atoms vs particle size.....  | <b>1</b>  |
| <b>Figure 1.2</b> | Structural disparities of nanoparticles ranging from 0D,1D, 2D& 3D.....  | <b>2</b>  |
| <b>Figure 1.3</b> | Crystal structure of ZnO.....  | <b>4</b>  |
| <b>Figure 1.4</b> | Graphene, the parent of all graphitic form.....  | <b>10</b> |
| <b>Figure 2.1</b> | Schematic diagram depicting the growth scheme of ZnO nano rod by the hydrothermal process.....   | <b>43</b> |
| <b>Figure 2.2</b> | Schematic diagram depicting the reduction of MTT by mitochondrial dehydrogenase enzyme and form formazan crystals.....   | <b>48</b> |
| <b>Figure 2.3</b> | Schematic diagram depicting the enzymatic conversion of the tetrazolium salt [iodonitrotetrazolium (INT)] in to purple cloured formazan.....   | <b>49</b> |
| <b>Figure 2.4</b> | Schematic diagram of depicting the mechanism of the oxidation of DCFH-DA.....  | <b>50</b> |
| <b>Figure 2.5</b> | Schematic diagram depicting oxidation of MitoSox Red in to 2-hydroxy-5-(triphenyl phosphonium) hexylethidium .....   | <b>51</b> |
| <b>Figure 2.6</b> | Schematic diagram depicting the mechanism of the $\Delta\Psi_m$ dependent accumulation of JC-1 in to healthy mitochondria.....   | <b>52</b> |
| <b>Figure 2.7</b> | Schematic diagram depicting the mechanism of Annexin V/PI staining..   | <b>53</b> |
| <b>Figure 2.8</b> | Schematic diagram depicting the different stages in cell cycle.....  | <b>54</b> |
| <b>Figure 2.9</b> | Schematic diagram representing the Alamar blue assay principle.....  | <b>57</b> |
| <b>Figure 3.1</b> | Schematic diagram depicting the ZnO interaction with biological systems.....   | <b>74</b> |
| <b>Figure 3.2</b> | Representative SEM images of spherical ZnO NCs .....   | <b>75</b> |
| <b>Figure 3.3</b> | SEM images depicting the rod shaped ZnO nanocrystals.....  | <b>76</b> |
| <b>Figure 3.4</b> | (a) HR TEM and (b) XRD pattern of ~ 5 nm sized ZnO NCs, (b-inset) Optical photograph of 5 nm sized ZnO colloidal NCs emitting bright yellow fluorescence under UV excitation, (c) SEM image and (d) XRD pattern of ~ 200 nm sized ZnO..... | <b>77</b> |
| <b>Figure 3.5</b> | (a) Schematic diagram depicting the surface chemical modifications in ZnO NCs, (b)FTIR spectra of bare ZnO, bare silica, silica capped ZnO, starch, starch coated ZnO, and PEGylated ZnO.....  | <b>78</b> |
| <b>Figure 3.6</b> | E.coli grown on LB agar plates after incubation with different particle sizes of ZnO for two representative concentrations.....  | <b>79</b> |
| <b>Figure 3.7</b> | Number of (a) <i>E.coli</i> colonies grown on LB agar plates at different particle sizes of ZnO.....   | <b>80</b> |
| <b>Figure 3.8</b> | SEM images of E.coli (a) before and (b) after ZnO treatment.....   | <b>81</b> |
| <b>Figure 3.9</b> | Number of (a) <i>S.aureus</i> colonies grown on LB agar plates at different particle sizes of ZnO.....   | <b>81</b> |

|                    |  |           |
|--------------------|--|-----------|
| <b>Figure 3.10</b> | Viability of cells incubated with different concentrations of ZnO NCs (0 - 500 $\mu$ M) for 12 and 24 h determined by MTT assay.....   | <b>83</b> |
| <b>Figure 3.11</b> | Effect of size-scale (5 nm or 200 nm) on the percentage viability of primary HUVECs and cancer (KB) cells treated with 0-500 $\mu$ M ZnO NCs.....  | <b>83</b> |
| <b>Figure 3.12</b> | Cell viability analysis of HUVEC cells treated with bare, PEGylated, SiO <sub>2</sub> capped and starch capped ZnO NCs, for 24 h .....   | <b>84</b> |
| <b>Figure 3.13</b> | Cell viability analysis of KB cells treated with bare, PEGylated, SiO <sub>2</sub> capped and starch capped ZnO NCs, for 24 h.....   | <b>84</b> |
| <b>Figure 3.14</b> | Dose dependent LDH leakage study after 12 and 24 h of incubation of ZnO NCs with cells.....  | <b>85</b> |
| <b>Figure 3.15</b> | Optical micrographs of (a) HUVECs and (b) KB cells treated with 0, 200 and 300 $\mu$ M of 5 nm ZnO NCs for 24 h.....   | <b>86</b> |
| <b>Figure 3.16</b> | Confocal microscopy study of cytoskeletal F-actin arrangement of (c) HUVECs and (d) KB cells treated with 200 $\mu$ M of 5 nm ZnO NCs for 24 h.....  | <b>87</b> |
| <b>Figure 3.17</b> | Flow cytogram and confocal images portraying the level of reactive oxygen species (DCFH-DA assay) produced in HUVECs (a & c) and KB (b & d) cells treated with 0, 200 and 300 $\mu$ M of 5 nm ZnO NCs for 24 h.....  | <b>88</b> |
| <b>Figure 3.18</b> | Flow cytogram and confocal images showing the level of mitochondrial superoxide (MitoSox Red assay) produced in HUVECs (a & c) and KB cells (b & d) treated with 0, 100, 200 and 300 $\mu$ M of 5nm ZnO NCs for 24 h.....                                    | <b>89</b> |
| <b>Figure 3.19</b> | Flow cytogram and confocal images depicting the changes in (a)mitochondrial membrane potential ( $\Delta\Psi$ m) of HUVECs (a & c) and KB cells (b & d) treated with 0, 200 and 300 $\mu$ M of 5 nm ZnO NCs for 24h.....                                     | <b>91</b> |
| <b>Figure 3.20</b> | Flow cytogram and confocal images representing apoptosis assay based on Annexin V-FITC and PI staining of cells. (a) HUVECs and (b) KB cells were treated with 0, 200 $\mu$ M concentration of 5 nm ZnO for 12 and 24 h.....                                 | <b>93</b> |
| <b>Figure 3.21</b> | Effect of ZnO NCs on cell cycle: Histogram representing cell cycle analysis of (a) HUVECs and (b) KB cells treated with 0 - 300 $\mu$ M of 5 nm ZnO NCs for 24h.....   | <b>94</b> |
| <b>Figure 3.22</b> | Flow cytogram and confocal microscopic analysis showing concentration of freeZn <sup>2+</sup> ions in the intracellular regions of HUVECs (a & c) and KB (b & d) treated with 0-300 $\mu$ M of 5 nm ZnO NCs for 24 h.....                                    | <b>96</b> |
| <b>Figure 3.23</b> | Flow cytogram indicating the cytosolic pH level of (a) HUVECs and (b) KB cells Spectrofluorimetric data of LysoSensor Yellow/Blue dextran assay detecting the lysosomal acidity difference between HUVECs and KB cells.....                                  | <b>97</b> |
| <b>Figure 3.24</b> | Schematic diagram depicting the preferential anti-cancer mechanisms of ZnO NCs. It is shown that ZnO nanocrystals rapidly dissolve in acidic tumor microenvironment leading to Zn <sup>2+</sup> mediated multiple stress mechanism against cancer cells..... | <b>98</b> |

|                    |  |            |
|--------------------|--|------------|
| <b>Figure 4.1</b>  | Physicochemical characterization of as prepared graphene: (a) AFM image (b) layer thickness measured using AFM height image and (c) HR-TEM image (d) Raman spectrum.....   | <b>106</b> |
| <b>Figure 4.2</b>  | FESEM and XPS pattern of pristine and carboxyl functionalized graphene.....  | <b>107</b> |
| <b>Figure 4.3</b>  | Contact angle measurement of pristine graphene ( <i>p</i> -G).....   | <b>108</b> |
| <b>Figure 4.4</b>  | Contact angle measurement of pristine graphene ( <i>f</i> -G).....   | <b>108</b> |
| <b>Figure 4.5</b>  | Confocal and flow cytometry data depicting differential uptake of <i>p</i> -G and <i>f</i> -G in Vero cells.....   | <b>110</b> |
| <b>Figure 4.6</b>  | Cell viability analysis in <i>p</i> -G and <i>f</i> -G treated Vero cells.....   | <b>111</b> |
| <b>Figure 4.7</b>  | LDH leakage analysis in <i>p</i> -G and <i>f</i> -G treated Vero cells.....  | <b>112</b> |
| <b>Figure 4.8</b>  | Flow cytogram showing apoptosis assay based on Annexin V-FITC and PI staining of cells. Vero cells were treated with 0 to 300 $\mu\text{g mL}^{-1}$ concentration of <i>p</i> -G (upper panel) and <i>f</i> -G (lower panel) at 37 °C for 24 h.....                | <b>112</b> |
| <b>Figure 4.9</b>  | Detection of ROS level in cells treated both <i>p</i> -G and <i>f</i> -G.....  | <b>113</b> |
| <b>Figure 4.10</b> | SEM images of graphene treated macrophage cell line RAW 264.7: (a) control (b) <i>p</i> -G 75 $\mu\text{g/ml}$ and (c) <i>f</i> -G 75 $\mu\text{g/ml}$ (d) EDX spectrum of <i>f</i> -G treated cells.....  | <b>114</b> |
| <b>Figure 4.11</b> | Confocal Raman spectral mapping of graphene treated macrophage cells.....  | <b>115</b> |
| <b>Figure 4.12</b> | Fluorescence confocal microscopy images of (a) <i>p</i> -G (75 $\mu\text{g/ml}$ ) and (b) <i>f</i> -G (75 $\mu\text{g/ml}$ ) treated macrophage cell line RAW 264.7.....   | <b>116</b> |
| <b>Figure 4.13</b> | Differential interference contrast (DIC) imaging showing energy dependent endocytosis of graphene by RAW 264.7 cells. ....   | <b>117</b> |
| <b>Figure 4.14</b> | Effect of <i>p</i> -G and <i>f</i> -G on cell viability. RAW 264.7 cells incubated with different concentrations (0-75 $\mu\text{g/ml}$ ) of <i>p</i> -G or <i>f</i> -G for 48 h and Alamar blue assay was performed.....  | <b>118</b> |
| <b>Figure 4.15</b> | Effect of <i>p</i> -G and <i>f</i> -G on plasma membrane integrity. RAW 264.7 cells incubated with different concentrations (0-75 $\mu\text{g/ml}$ ) of <i>p</i> -G or <i>f</i> -G for 48 h and plasma membrane integrity was studied using LDH leakage assay..... | <b>119</b> |
| <b>Figure 4.16</b> | Assessment of intracellular ROS. Confocal microscopy and flow cytogram showing the expression of reactive oxygen species (DCF-DA assay) in RAW 264.7 cells.....  | <b>120</b> |
| <b>Figure 4.17</b> | Apoptosis assay by Annexin V/Propidium iodide staining. Confocal ..... images and flow cytogram showing Annexin V/PI stained RAW 264.7 cells treated with: 0, 75 $\mu\text{g/ml}$ <i>p</i> -G and 75 $\mu\text{g/ml}$ <i>f</i> -G samples.....                     | <b>121</b> |
| <b>Figure 4.18</b> | Viability of HUVEC cells incubated with different concentrations of both .. <i>p</i> -G and <i>f</i> -G (0 – 200 $\mu\text{g/ml}$ ) for 24 h.....  | <b>123</b> |
| <b>Figure 4.19</b> | Dose dependent LDH leakage study after 24 h of incubation of both ..... graphene with HUVEC cells.....   | <b>123</b> |

|                    |   |            |
|--------------------|---|------------|
| <b>Figure 4.20</b> | Flow cytogram portraying the level of reactive oxygen species(DCFH-DA) produced in HUVECs cells treated 0,5 and 50 µg/ml of both <i>p</i> -G and <i>f</i> -G for 24 h.....  | <b>124</b> |
| <b>Figure 4.21</b> | Effect of graphene treatment on the oxidative degradation of lipids in HUVEC cells.....   | <b>125</b> |
| <b>Figure 4.22</b> | Detection of glutathione oxidation level of in HUVEC cells.....   | <b>126</b> |
| <b>Figure 4.23</b> | Flowcytometric analysis of the intracellular Ca <sup>2+</sup> level of HUVEC.....   | <b>127</b> |
| <b>Figure 4.24</b> | Flow cytogram depicting the changes in (a) mitochondrial membrane potential of HUVEC cells treated with 0, 5 and 50 µg/ml of both <i>p</i> -G and <i>f</i> -G for 24 h.....   | <b>128</b> |
| <b>Figure 4.25</b> | Flow cytogram representing apoptosis assay based on Annexin V-FITC and PI staining of cells. HUVECs cells were treated with 0, 5 and 50 µg/ml concentration of both <i>p</i> -G and <i>f</i> -G 24 h.....   | <b>129</b> |
| <b>Figure 4.26</b> | Genomic microarray analysis depicting the up regulation/ down regulation of gene related to Nuclear division, Mitosis, Cell division, Regulation of cell cycle, Spindle organization.....   | <b>131</b> |
| <b>Figure 4.27</b> | Genomic microarray analysis depicting the up regulation/ down regulation of DNA repair related genes.....   | <b>132</b> |
| <b>Figure 4.28</b> | Genomic microarray analysis depicting the up regulation/ down regulation of Protein DNA complex assembly, Chromatin assembly, Chromosome Organization related genes.....  | <b>132</b> |
| <b>Figure 4.29</b> | Genomic microarray analysis depicting the up regulation/ down regulation of mitotic sister chromatid segregation related genes.....   | <b>133</b> |
| <b>Figure 4.30</b> | Comet analysis shows the dose dependent DNA damages in HUVECs.....  | <b>134</b> |
| <b>Figure 4.31</b> | Assessment of hemolytic activity. (a) Hemolysis analysis of different concentrations (0-100 µg/ml) of both graphene systems treated whole blood.....  | <b>135</b> |
| <b>Figure 4.32</b> | Analysis of platelet activation and aggregation. Flow cytometry based platelet activation analysis showing the expression of activated platelet marker CD62p and resting platelet marker CD42b.....   | <b>137</b> |
| <b>Figure 4.33</b> | Platelet count analysis of whole blood treated with different concentrations (0-75 µg/ml) of <i>p</i> -G and <i>f</i> -G showing normal platelet count.....   | <b>138</b> |
| <b>Figure 4.34</b> | (a) Prothrombin time (PT) of <i>p</i> -G and <i>f</i> -G (0-75 µg/ml) treated blood plasma samples showing no significant variation from normal range, which is depicted as shaded region in both graphs.....   | <b>139</b> |
| <b>Figure 4.35</b> | Activated partial thromboplastin time (aPTT) ratio of <i>p</i> -G and <i>f</i> -G (0-75 µg/ml) treated blood plasma samples showing no significant variation from normal range, which is depicted as shaded region in both graphs..   | <b>139</b> |
| <b>Figure 4.36</b> | Pro-inflammatory cytokine expression: (a) Flowcytometric analysis showing percentage expression of pro-inflammatory cytokines from <i>p</i> -G and <i>f</i> -G treated PBMCs. Expression from PBS and LPS treated cells were taken as 0 and 100%, respectively (b) Dot plots showing relative expression of various cytokines in <i>p</i> -G and <i>f</i> -G treated PBMCs..... | <b>140</b> |

|                    |  |            |
|--------------------|--|------------|
| <b>Figure 4.37</b> | Immunostimulation analysis. (a) Proliferation of lymphocytes on exposure to different concentration of <i>p</i> -G and <i>f</i> -G for 3 days. Optical microscope images cells treated with (b) PBS, (c) PPHA-M (positive control), (d) <i>p</i> -G and (e) <i>f</i> -G. Graphene treated cells can be seen well separated whereas PHA-M treated cells are agglutinated..... | <b>141</b> |
| <b>Figure 4.38</b> | Immunosuppression analysis. Cell viability analysis on lymphocytes exposed to mixture of PHA-M + <i>p</i> -G or <i>f</i> -G. Optical microscopic images of (b) <i>p</i> -G and (c) <i>f</i> -G treated cells.....  | <b>142</b> |
| <b>Figure 5.0</b>  | In vivo real time imaging of Swiss albino mice injected with <sup>99m</sup> Tc alone.....  | <b>152</b> |
| <b>Figure 5.1</b>  | <i>In vivo</i> real time imaging of Swiss albino mice injected with <sup>99m</sup> Tc <i>f</i> -G.....   | <b>153</b> |
| <b>Figure 5.2</b>  | Histological analysis of mouse heart tissue sample after the post administration of both samples for 1,8,30 and 90 day.....  | <b>154</b> |
| <b>Figure 5.3</b>  | Schematic diagrams depicting the normal structure of lung.....   | <b>155</b> |
| <b>Figure 5.4</b>  | Histological analysis of control (a), <i>p</i> -G (c,d) and <i>f</i> -G (e,f) treated mice lung tissue sample for 1 day.....   | <b>156</b> |
| <b>Figure 5.5</b>  | (a) Optical image, (b) Raman spectral mapping of lung tissue sample (c)Raman spectra of graphene from mouse lung.....  | <b>157</b> |
| <b>Figure 5.6</b>  | Histological analysis depicting that after 8 day the <i>p</i> -G treated lung tissue showed mild congestion (a,b). <i>f</i> -G treated samples shows the presence of graphene and hyperplastic epithelium (c,d,e).....   | <b>158</b> |
| <b>Figure 5.7</b>  | (a) Optical image, (b) Raman spectral mapping of lung tissue sample (c)corresponding Raman spectra from lung tissue.....   | <b>158</b> |
| <b>Figure 5.8</b>  | Histology of 1 month <i>p</i> -G samples shows hyperplasia of bronchial epithelium. <i>f</i> -G treated samples displaying hyperplasia and hypertrophy of bronchial epithelium.....  | <b>159</b> |
| <b>Figure 5.9</b>  | (a)Optical image, (b) Raman spectral mapping of lung tissue sample (c)corresponding Raman spectra from lung tissue.....  | <b>160</b> |
| <b>Figure 5.10</b> | <i>p</i> -G treated 3 month lung tissue sample shows mild dilatation of bronchus and bronchioles and mild hyperplasia and hypertrophy of bronchial epithelium (a,b). <i>f</i> -G treated sample (c, d) shows mild dilation of bronchioles, occasional emphysema and moderate congestion.....   | <b>160</b> |
| <b>Figure 5.11</b> | (a) Optical image, (b) Raman spectral mapping of lung tissue sample (c)corresponding Raman spectra from lung tissue.....   | <b>161</b> |
| <b>Figure 5.12</b> | Histology analysis of control (a,b), <i>p</i> -G treated (b,c) and <i>f</i> -G treated mouse spleen sample for 1 day.....  | <b>162</b> |
| <b>Figure 5.13</b> | (a) Optical image, (b) Raman spectral mapping of 24 h Spleen tissue sample (c)corresponding Raman spectra from spleen tissue.....  | <b>163</b> |
| <b>Figure 5.14</b> | Histology analysis shows the 8 day <i>p</i> -G treated spleen samples with increased number of megakaryocytes (a,b). <i>f</i> -G treated samples shows increased number of macrophages.....  | <b>163</b> |
| <b>Figure 5.15</b> | (a) Optical image, (b) Raman spectral mapping of 8 day spleen tissue sample (c) corresponding Raman spectra from spleen tissue.....  | <b>164</b> |

|                    |  |            |
|--------------------|--|------------|
| <b>Figure 5.17</b> | (a) Optical image, (b) Raman spectral mapping of Spleen tissue sample (c)corresponding Raman spectra from spleen tissue.....   | <b>165</b> |
| <b>Figure 5.18</b> | Histology analysis of 3 month sample. (a,b) <i>p</i> -G samples, (c,d) <i>f</i> -G samples.....  | <b>165</b> |
| <b>Figure 5.19</b> | (a) Optical image, (b) Raman spectral mapping of Spleen tissue sample (c) corresponding Raman spectra from spleen tissue.....  | <b>166</b> |
| <b>Figure 5.20</b> | Schematic diagram shows the normal structure of the liver.....   | <b>166</b> |
| <b>Figure 5.21</b> | Histology of 1 day liver samples. (a,b) Untreated liver tissue, (c,d) <i>p</i> -G and (e,f) <i>f</i> -G post treated for 1 day.....  | <b>167</b> |
| <b>Figure 5.22</b> | (a) Optical image, (b) Raman spectral mapping of liver tissue sample (c) corresponding Raman spectra from liver tissue.....  | <b>168</b> |
| <b>Figure 5.23</b> | Histology of 8 day liver samples. <i>p</i> -G treated samples shows the presence of Kupffer cells (a,b). <i>f</i> -G treated liver sample with mild portal congestion and some sinusoidal (c,d).....   | <b>168</b> |
| <b>Figure 5.24</b> | (a) Optical image, (b) Raman spectral mapping of liver tissue sample (c) corresponding Raman spectra from liver tissue.....  | <b>169</b> |
| <b>Figure 5.25</b> | Histology of 1 moth liver samples. <i>p</i> -G liver samples with prominent cells lining sinusoids (a,b). <i>f</i> -G liver sample showing severe damages in hepatocytes.....  | <b>170</b> |
| <b>Figure 5.26</b> | (a) Optical image, (b) Raman spectral mapping of liver tissue sample (c)corresponding Raman spectra from liver tissue.....   | <b>170</b> |
| <b>Figure 5.27</b> | (a,b) <i>p</i> -G treated liver tissue. (b,c) <i>f</i> -G treated liver tissue. Both samples treated liver samples showed more degeneration in hepatocytes.....  | <b>170</b> |
| <b>Figure 5.28</b> | (a) Optical image, (b) Raman spectral mapping of liver tissue sample (c) corresponding Raman spectra from liver issue.....   | <b>171</b> |
| <b>Figure 5.29</b> | Schematic diagram shows the structure of the kidney.....   | <b>171</b> |
| <b>Figure 5.30</b> | Histology analysis of 1-day kidney samples. Untreated mouse kidney sections show the normal histological pattern. (c, d) <i>p</i> -G treated kidney sample showing degenerated glomeruli and (e, f) <i>f</i> -G kidney sample with regions of infarct and casts in the distal tubules..... | <b>172</b> |
| <b>Figure 5.31</b> | (a) Optical image, (b) Raman spectral mapping of kidney tissue sample (c) corresponding Raman spectra from kidney tissue.....  | <b>173</b> |
| <b>Figure 5.32</b> | Histology of 8 day kidney samples. <i>p</i> -G treated kidney samples displayed granuloma formation in glomeruli (a,b,c). <i>f</i> -G treated samples shows severe degeneration of glomeruli.....  | <b>173</b> |
| <b>Figure 5.33</b> | (a) Optical image, (b) Raman spectral mapping of kidney tissue sample (c) corresponding Raman spectra from kidney tissue.....  | <b>174</b> |
| <b>Figure 5.34</b> | Histology of 8 day kidney samples. (a,b) <i>p</i> -G treated kidney samples displayed severe congestion, degeneration and necrosis of glomeruli. (c,d) <i>f</i> -G treated samples shows infarction and interstitial nephritis.....  | <b>174</b> |
| <b>Figure 5.35</b> | (a) Optical image, (b) Raman spectral mapping of kidney tissue sample (c)corresponding Raman spectra from kidney tissue.....   | <b>175</b> |
| <b>Figure 5.36</b> | Histology of 3 moth kidney samples. (a,b) <i>p</i> -G and (c,d) <i>f</i> -G samples shows the degeneration in glomeruli.....   | <b>175</b> |

|                    |   |            |
|--------------------|---|------------|
| <b>Figure 5.37</b> | (a) Optical image, (b) Raman spectral mapping of kidney tissue sample (c) corresponding Raman spectra from kidney tissue..... | <b>176</b> |
| <b>Figure 5.38</b> | Histology analysis of mouse brain samples.....  | <b>176</b> |
| <b>Figure 5.39</b> | Histology analysis of mouse testis samples.....   | <b>177</b> |
| <b>Figure 5.40</b> | RT-PCR analysis of mouse serum sample after the treatment with both <i>p</i> -G and <i>f</i> -G for 1 day.....                | <b>178</b> |
| <b>Figure 5.41</b> | RT-PCR analysis of mouse serum sample after the treatment with both <i>p</i> -G and <i>f</i> -G for 8 day.....                | <b>179</b> |

### **List of Tables**

|                 |  |            |
|-----------------|--|------------|
| <b>Table 1.</b> | Blood biochemistry analysis of mouse treated with both <i>p</i> -G and <i>f</i> -G for 1, 30 and 90 day..... | <b>179</b> |
|-----------------|--|------------|