

Figure S1: HepG2 (human hepatocellular carcinoma) cells ( $1 \times 10^6$  cells/mL) were treated with different concentrations of sodium arsenite ranging from 5 to 40 µg/mL for 24 h. % cell death values were calculated from an MTT assay. Results presented here are one of the three representative experiments  $\pm$ S.D.

Figure S2:

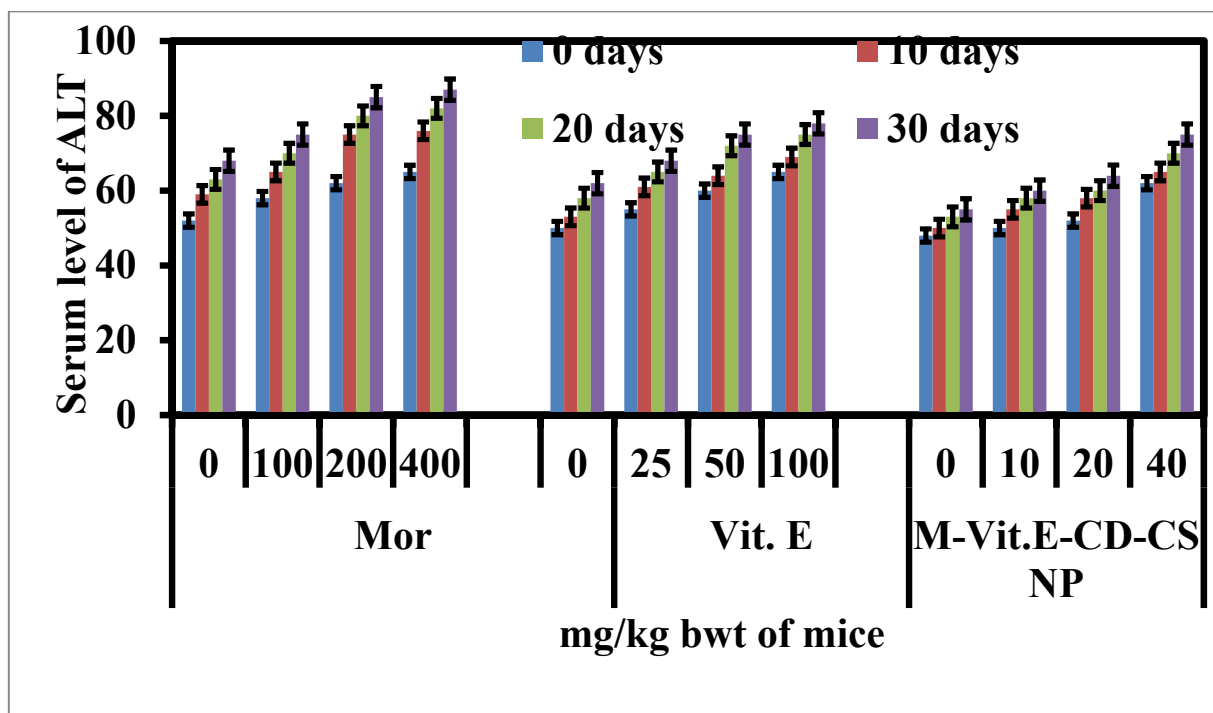


Figure S3:

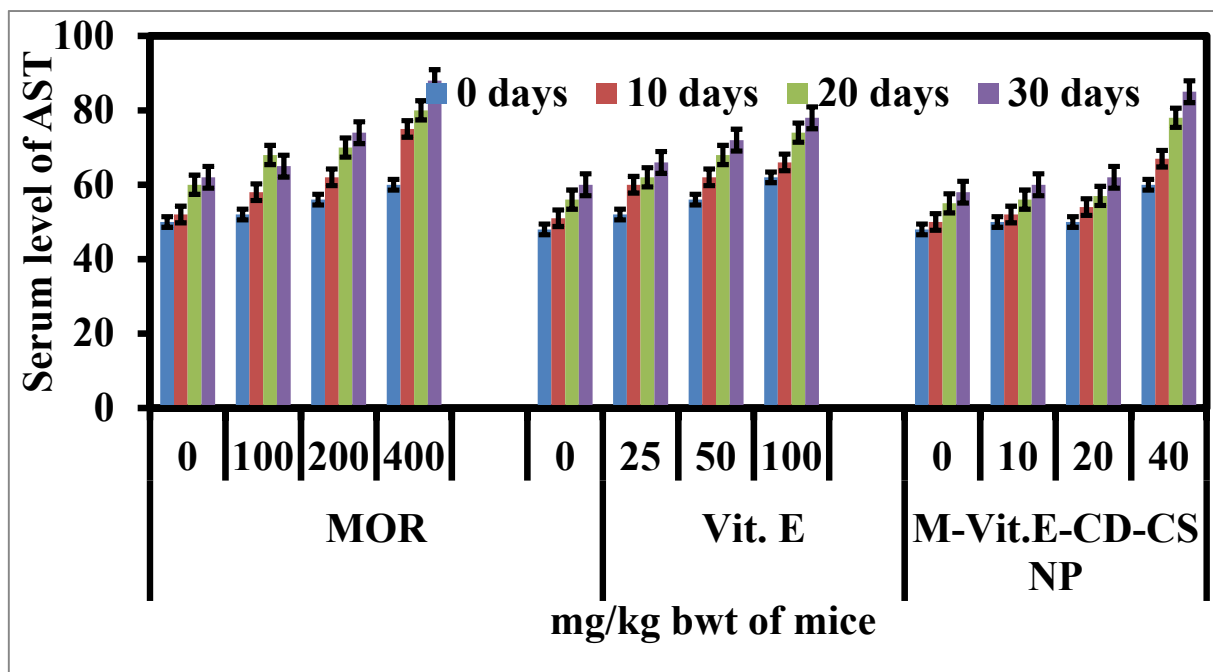


Figure S2 and S3: Effect of Morin (MOR), vitamin E and M-Vit.E-CD-CS NPs on liver function markers (ALT and AST). Different dosage of Morin (MOR), vitamin E and M-Vit.E-CD-CS NPs

were orally given to the normal BALB/c mice and the serum level of ALT and AST were measured. Data is one of the three representative experiments  $\pm$  SD.

**Table S1: Effect of oral administration of MOR and MCNPs on haematological Parameters**

<b>Parameters</b>	<b>Control Group</b>	<b>Arsenic (40 mg/L) treated mice</b>	<b>Arsenic + MOR (200 mg/kg) treated mice</b>	<b>Arsenic + Vitamin E (50 mg/kg) treated mice</b>	<b>Arsenic + M-Vit.E-CD-CS NPs (20 mg/kg)</b>
<b>Body weight gain (gm)</b>	<b>0.52 <math>\pm</math> 0.06</b>	<b>0.29 <math>\pm</math> 0.03</b>	<b>0.45 <math>\pm</math> 0.04</b>	<b>0.39 <math>\pm</math> 0.02</b>	<b>0.49 <math>\pm</math> 0.03</b>
<b>RBC : No. of cells (10<sup>6</sup>/<math>\mu</math>L)</b>	<b>8.1 <math>\pm</math> 0.53</b>	<b>5.2 <math>\pm</math> 0.35</b>	<b>6.8 <math>\pm</math> 0.27</b>	<b>6.1 <math>\pm</math> 0.33</b>	<b>7.5 <math>\pm</math> 0.41</b>
<b>WBC : No. of cells (10<sup>3</sup>/<math>\mu</math>L)</b>	<b>12.6 <math>\pm</math> 0.13</b>	<b>16.2 <math>\pm</math> 0.31</b>	<b>15.1 <math>\pm</math> 0.24</b>	<b>15.8 <math>\pm</math> 0.41</b>	<b>13.1 <math>\pm</math> 0.22</b>
<b>Hb (gm/dl)</b>	<b>13.6 <math>\pm</math> 0.38</b>	<b>11.7 <math>\pm</math> 0.23</b>	<b>12.5 <math>\pm</math> 0.47</b>	<b>12.1 <math>\pm</math> 0.17</b>	<b>12.9 <math>\pm</math> 0.38</b>
<b>PLT (10<sup>3</sup>/<math>\mu</math>L)</b>	<b>556 <math>\pm</math> 31.2</b>	<b>412 <math>\pm</math> 28.2</b>	<b>512 <math>\pm</math> 25.8</b>	<b>516 <math>\pm</math> 36.2</b>	<b>545 <math>\pm</math> 19.7</b>
<b>LDH (U/L)</b>	<b>401 <math>\pm</math> 24.3</b>	<b>742 <math>\pm</math> 31.3</b>	<b>495 <math>\pm</math> 14.5</b>	<b>481 <math>\pm</math> 16.6</b>	<b>412 <math>\pm</math> 11.3</b>
<b>Uric acid (mg/dL)</b>	<b>2.61 <math>\pm</math> 0.72</b>	<b>4.73 <math>\pm</math> 0.51</b>	<b>3.09 <math>\pm</math> 0.34</b>	<b>3.21 <math>\pm</math> 0.51</b>	<b>2.76 <math>\pm</math> 0.42</b>
<b>Creatinine (mg/dL)</b>	<b>0.51 <math>\pm</math> 0.04</b>	<b>2.8 <math>\pm</math> 0.13</b>	<b>1.7 <math>\pm</math> 0.09</b>	<b>1.5 <math>\pm</math> 0.06</b>	<b>0.61 <math>\pm</math> 0.03</b>
<b>Cholesterol (mg/dL)</b>	<b>145 <math>\pm</math> 7.6</b>	<b>281 <math>\pm</math> 31.2</b>	<b>162 <math>\pm</math> 11.2</b>	<b>173 <math>\pm</math> 16.3</b>	<b>151 <math>\pm</math> 4.5</b>
<b>TG (mg/dL)</b>	<b>85.1 <math>\pm</math> 8.2</b>	<b>163 <math>\pm</math> 12.1</b>	<b>92.4 <math>\pm</math> 9.1</b>	<b>104.4 <math>\pm</math> 6.2</b>	<b>89.3 <math>\pm</math> 3.8</b>
<b>HDL (mg/dL)</b>	<b>61.8 <math>\pm</math> 2.9</b>	<b>35.6 <math>\pm</math> 4.1</b>	<b>45.1 <math>\pm</math> 2.3</b>	<b>48.4 <math>\pm</math> 3.1</b>	<b>55.3 <math>\pm</math> 3.5</b>
<b>LDL (mg/dL)</b>	<b>76.2 <math>\pm</math> 5.7</b>	<b>165.6 <math>\pm</math> 10.8</b>	<b>92.5 <math>\pm</math> 6.1</b>	<b>95.6 <math>\pm</math> 5.3</b>	<b>81.1 <math>\pm</math> 4.6</b>
<b>Phospholipid (mg/dL)</b>	<b>45.5 <math>\pm</math> 7.5</b>	<b>22.1 <math>\pm</math> 4.3</b>	<b>38.1 <math>\pm</math> 2.9</b>	<b>35.3 <math>\pm</math> 3.1</b>	<b>42.5 <math>\pm</math> 3.1</b>

Values are expressed as mean  $\pm$  SEM (n=3). P>0.05 when compared to normal group.

**Table S2: Arsenic deposition in different organ**

<b>Arsenic concentration in µg/g of tissue in 30 days</b>						
	<b>Liver</b>	<b>Kidney</b>	<b>Cerebellum</b>	<b>Lung</b>	<b>Heart</b>	<b>Skin</b>
<b>Arsenic, 40 mg/L</b>	<b>145.3 ± 5.1</b>	<b>29.8 ± 1.8</b>	<b>12.5± 4.4</b>	<b>14.6 ± 1.3</b>	<b>12.8 ± 5.6</b>	<b>4.8 ± 2.6</b>
<b>Arsenic + MOR (200 mg/kg)</b>	<b>110.4 ± 2.5</b>	<b>18.1 ± 1.4</b>	<b>8.2 ± 2.1</b>	<b>9.9 ± 1.9</b>	<b>8.5 ± 2.2</b>	<b>1.9 ± 0.6</b>
<b>Arsenic + vitamin E (50 mg/kg)</b>	<b>95.2 ± 2.4</b>	<b>15.1 ± 1.6</b>	<b>6.6 ± 1.3</b>	<b>7.1 ± 1.1</b>	<b>6.1 ± 0.8</b>	<b>0.7 ± 0.16</b>
<b>Arsenic + M-Vit.E-CD-CS NPs (20 mg/kg)</b>	<b>41.6 ± 3.3</b>	<b>3.1 ± 1.2</b>	<b>0.52 ± 0.07</b>	<b>1.2 ± 0.03</b>	<b>1.5 ± 0.21</b>	<b>0</b>

Values are expressed as mean ± SEM (n=3). P>0.05 when compared to normal group.