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| **Table S1. Levels of glucose and insulin.** |
| **D + AD-MSCs+DPPD** | **D + ADMSCs** | **D + DPPD** | **Diabetic (D)** | **DPPD** | **Control** |  |
| 105.50±5.17 **bc** | 133.66 ±4.65 **ab** | 174.20±5.24 **ab** | 395.20±14.33 **a** | 93.33 ± 4.28 | 92.83± 3.14 | **Mean****±SEM** | **Glucose****(mg/ 100 ml)** |
| -73.30 | -66.17 | -55.92 |  |  |  | **%** |
| 16.90±0.56 **bc** | 15.47±1.05 **ab** | 14.37±0.42 **ab** | 8.16±0.37 **a** | 17.20±0.61 | 17.10±0.53 | **Mean****±SEM** | **Insulin****(µ I U/ml)** |
| +107.10 | +89.58 | +76.10 |  |  |  | **%** |
| 2.92± 0.11 **bc** | 3.10± 0.12 **ab**  | 3.65± 0.10 **ab** | 4.94± 0.22 **a** | 3.13± 0.12 | 2.90± 0.13 | **Mean****±SEM** | **HbA1c****(%)** |
| - 40.89 | - 37.24 | - 26.11 |  |  |  | **%** |

Values expressed as ± SEM (n = 6). a,b & c are Significant differences (*p* ≤ 0.05) compared to control, diabetic untreated and DPPD-diabetic treated groups, respectively. % is the percent of change compared to the diabetic group

as reported in the supplementary tables.

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| **Table S2.** Renal oxidative stress, antioxidant markers levels & viable cells (G0/G1) %. |
| **D + AD-MSCs+DPPD** | **D +****ADMSCs** | **D +****DPPD** | **Diabetic (D)** | **DPPD** | **Control** |  |
| 29.00 **±** 2.14 **bc** | 35.90 **±** 2.14 **ab** | 44.00 **±** 3.11 **ab** | 59.77 **±** 4.93 **a** | 26.50**±** 2.16 | 24.30**±** 2.01 | **Mean****±SEM** | **MDA** **(nmol/g)** |
| - 51.48 | - 39.93 | - 26.38 |  | **%** |
| 0.50 ±0.03 **bc** | 0.65 ±0.06 **ab**  | 0.90 ±0.09 **ab** | 1.50 ±0.19 **a** | 0.45±0.05 | 0.46 ±0.02 | **Mean****±SEM** | H2O2**(mM/g)** |
| - 66.66 | - 56.66 | - 40.00 |  | **%** |
| 3.02 ± 0.14 **bc** | 4.10 ± 0.83 **ab** | 5.20 ± 0.25 **ab** | 8.90 ± 0.54 **a** | 2.95 ± 0.27 | 2.90 ± 0.24 | **Mean****±SEM** | **AGEs****(AU/mg protein)** |
| - 66.06 | - 53.93 | - 41.57 |  | **%** |
| 33.50 ±2.87 **bc** | 45.50 ±3.16 **ab** | 62.00 ± **3**.24 **ab** | 88.00 ±4.66 **a** | 29.00 ±2.16 | 30.50 ±2.22 | **Mean****±SEM** | **XO** **(nmol/ml)** |
| - 61.93 | - 48.86 | - 29.54 |  | **%** |
| 55.30 ± 3.63 **bc** | 48.00 ± 2.90 **ab** | 39.50 ± 3.13 **ab** | 20.30 ± 2.23 **a** | 59.00 ± 3.07 | 57.60 ± 2.45 | **Mean****±SEM** | **GSH** **(mg/gm)** |
| + 172.41 | + 136.45 | + 94.58 |  | **%** |
| 13.20 ± 1.73 **bc** | 11.00 ± 0.88 **ab** | 9.40 ± 0.98 **ab** | 3.20 ± 0.04 **a** | 13.90 ± 1.65 | 13.70 ± 1.06 | **Mean****±SEM** | **SOD** **(u/gm)** |
| + 312.50 | + 243.75 | + 193.75 |  | **%** |
| 0.63 ± 0.05 **bc** | 0.55 ± 0.03 **ab** | 0.42 ± 0.02 **ab** | 0.20 ± 0.02 **a** | 0.68 ± 0.06 | 0.66 ± 0.04 | **Mean****±SEM** | **CAT** **(u/gm)** |
| + 215.00 | + 175.00 | + 110.00 |  | **%** |
| 8.20 ± 2.43 **bc** | 6.90 ± 1.57 **ab** | 4.80 ± 1.52 **ab** | 2.50 ± 0.02 **a** | 8.80 ± 1.92 | 8.70 ± 2.01 | **Mean****±SEM** | **GST** **(Mmol/gm)** |
| + 228.00 | + 176.00 | + 92.00 |  | **%** |
| 2.20 ±0.24 **bc** | 1.75 ±0.08 **ab**  | 1.30 ±0.06 **ab** | 0.50 ±0.01 **a** | 2.30±0.03 | 2.40 ±0.04 | **Mean****±SEM** | **TAC** **(mg/gm)** |
| + 340.00 | + 250.66 | + 160.00 |  | **%** |
| 245.00 ± 14.69 **bc** | 225.00 ± 13.42 **ab** | 190.00 ± 11.43 **ab** | 111.00 ± 5.33 **a** | 250.00 ± 16.58 | 256.00 ± 9.87 | **Mean****±SEM** | **HO-1** **(P mol/mg)** |
| + 120.72 | + 102.70 | + 71.17 |  | **%** |
| 93.50 ± 3.47 **bc** | 86.40 ± 4.32 **ab** | 77.30 ± 3.22 **ab** | 50.30 ± 2.05 **a** | 95.50 ± 2.53 | 95.20 ± 4.12 | **Mean****±SEM** | **G0/G1** **%** |
| + 85.88 | + 71.76 | + 53.67 |  | **%** |
| Values expressed as ± SEM (n = 6). a,b & c are Significant differences (P ≤ 0.05) compared to control, diabetic untreated and DPPD-diabetic treated groups, respectively. % is the percent of change compared to the diabetic group as reported in the supplementary tables. |

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| **Table S3.** Hepatic oxidative stress, antioxidant markers levels & viable cells (G0/G1) %. |
| **D + AD-MSCs+DPPD** | **D +****ADMSCs** | **D +****DPPD** | **Diabetic (D)** | **DPPD** | **Control** |  |
| 88.00 **±** 3.83 **bc** | 105.50 **±** 3.26 **ab** | 132.00 **±** 4.36 **ab** | 194.00**±** 7.55 **a** | 80.00**± 4**.76 | 81.50**±** 4.37 | **Mean****±SEM** | **MDA** **(nmol/g)** |
| - 54.63 | - 45.61 | - 31.95 |  | **%** |
| 0.60 ±0.02 **bc** | 0.70 ±0.03 **ab**  | 0.90 ±0.05 **ab** | 2.75 ±0.15 **a** | 0.53±0.15 | 0.55 ±0.12 | **Mean****±SEM** | H2O2**(mM/g)** |
| - 78.18 | - 74.54 | - 67.27 |  | **%** |
| 3.05 ± 0.16 **bc** | 4.30 ± 0.22 **ab** | 5.80 ± 0.07 **ab** | 9.50 ± 0.35 **a** | 3.00 ± 0.17 | 3.20 ± 0.15 | **Mean****±SEM** | **AGEs****(AU/mg protein)** |
| - 67.89 | - 54.73 | - 38.94 |  | **%** |
| 45.00 ±2.73 **bc** | 52.50 ±2.76 **ab** | 61.00 ±3.52 a**b** | 92.00 ± **4**.16 **a** | 42.50 ±3.26 | 42.00 ±2.54 | **Mean****±SEM** | **XO** **(nmol/ml)** |
| - 51.08 | - 42.93 | - 33.69 |  | **%** |
| 80.90 ± 3.76 **bc** | 73.60 ± 3.16 **ab** | 57.50 ± 3.53 a**b** | 32.50 ± 2.45 **a** | 82.80 ± 4.37 | 83.92 ± 4.43 | **Mean****±SEM** | **GSH** **(mg/gm)** |
| + 148.92 | + 126.46 | + 76.92 |  | **%** |
| 22.80 ± 2.52 **bc** | 18.95 ± 1.08 **ab** | 16.50 ± 2.62 a**b** | 9.80 ± 0.35 **a** | 24.20 ± 1.83 | 24.50 ± 1.65 | **Mean****±SEM** | **SOD** **(u/gm)** |
| +132.65 | + 93.36 | + 68.36 |  | **%** |
| 0.63 ± 0.05 **bc** | 0.55 ± 0.03 **ab** | 0.42 ± 0.02 **ab** | 0.20 ± 0.02 **a** | 0.68 ± 0.06 | 0.66 ± 0.04 | **Mean****±SEM** | **CAT** **(u/gm)** |
| + 215.00 | + 175.00 | + 110.00 |  | **%** |
| 10.90 ± 2.03 **bc** | 9.50 ± 1.93 **ab** | 7.80 ± 1.34 **ab** | 3.50 ± 0.06 **a** | 11.07 ± 1.96 | 11.20 ± 2.04 | **Mean****±SEM** | **GST** **(Mmol/gm)** |
| + 211.42 | + 171.42 | + 122.85 |  | **%** |
| 3.35 ±0.22 **bc** | 3.10 ±0.06 **ab**  | 2.70 ±0.03 **ab** | 1.10 ±0.01 **a** | 3.60±0.05 | 3.50 ±0.06 | **Mean****±SEM** | **TAC** **(mg/gm)** |
| + 204.54 | + 181.81 | + 145.45 |  | **%** |
| 415.00 ± 15.22 **bc** | 385.00 ± 13.54 **ab** | 330.00 ± 9.87 **ab** | 205.00 ± 10.86 **a** | 425.00 ± 17.52 | 430.00 ± 15.64 | **Mean****±SEM** | **HO-1** **(P mol/mg)** |
| + 102.43 | + 87.80 | + 60.97 |  | **%** |
| 90.50 ± 3.28 **bc** | 84.60 ± 3.72 **ab** | 75.30 ± 4.52 **ab** | 55.50 ± 3.26 **a** | 95.30 ± 2.83 | 93.50 ± 2.56 | **Mean****±SEM** | **G0/G1** **%** |
| + 63.06 | + 52.43 | + 35.67 |  | **%** |
| Values expressed as ± SEM (n = 6). a,b & c are Significant differences (P ≤ 0.05) compared to control, diabetic untreated and DPPD-diabetic treated groups, respectively. % is the percent of change compared to the diabetic group as reported in the supplementary tables. |

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| **Table S4. Serum creatinine, urea, and uric acid levels.** |
| **D + AD-MSCs+DPPD** | **D + ADMSCs** | **D +****DPPD** | **Diabetic (D)** | **DPPD** | **Control** |  |
| 0.47± 0.02 **bc** | 0.49 ± 0.04 a**b** | 0.54± 0.05 **ab** | 1.43± 0.07 **a** | 0.46 ± 0.03 | 0.45± 0.03 | **Mean****±SEM** | **Creatinine (mg/dl)** |
| - 67.13 | - 65.73 | - 62.23 |  | **%** |
| 22.02± 0.98 **bc** | 27.50±1.87 **ab** | 41.37± 2.54 **ab** | 76.75± 3.15 **a** | 21.50±0.95 | 20.33±1.51 | **Mean****±SEM** | **Urea** **(mg/dl)** |
| - 71.30 | - 64.16 | - 46.09 |  | **%** |
| 1.52± 0.04 **bc** | 1.77± 0.08 **ab** | 2.05± 0.12 **ab** | 3.33± 0.24 **a** | 1.46± 0.02 | 1.44± 0.04 | **Mean****±SEM** | **Uric acid (mg/dl)**  |
| - 54.35 | - 46.84 | - 38.43 |  | **%** |
| Values expressed as ± SEM (n = 6). a,b & c are Significant differences (P ≤ 0.05) compared to control, diabetic untreated and DPPD-diabetic treated groups, respectively. % is the percent of change compared to the diabetic group as reported in the supplementary tables. |

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| **Table S5. Serum AST, ALT, ALP, γ-GT, total bilirubin, total proteins, albumin & globulins levels.** |
| **D + AD-MSCs+DPPD** | **D +****AD-MSCs** | **D +****DPPD** | **Diabetic (D)** | **DPPD** | **Control** |  |
| 61.90 ± 2.65 **bc**  | 67.50 ± 3.01 **ab** | 85.50 ± 3.22 **ab** | 119.25 ± 4.13 **a**  | 61.00 ± 2.88 | 59.66 ± 3.54 | **Mean****±SEM** | **AST** **(u/l)** |
| - 48.09 | - 43.39 | - 28.30 |  | **%** |
| 32.90 ± 2.45 **bc** | 37.33 ± 2.98 **ab** | 47.00 ± 3.53 **ab** | 67.08  ± 4.73 **a** | 32.50 ± 2.03 | 31.50 ± 2.04 | **Mean****±SEM** | **ALT** **(u/l)** |
| - 50.59 | - 44.35 | - 29.93 |  | **%** |
| 250.00 ± 13.98 **bc** | 314.00± 17.42 **ab** | 341.00± 21.15 **ab** | 445.00 ± 32.33 **a** | 245.00 ±12.26  | 241.00 ± 10.15 | **Mean****±SEM** | **ALP** **(u/l)** |
| - 43.82 | - 28.79 | - 23.37 |  | **%** |
| 33.50 ± 1.54 **bc** | 36.00 ± 2.36 **ab** | 46.66 ± 2.27 **ab** | 80.60 ± 4.23 **a** | 31.66 ± 1.76 | 31.50 ± 1.25 | **Mean****±SEM** | **γ-GT** **(u/l)** |
| -58.43 | - 55.33 | - 42.10 |  | **%** |
| 0.61 ± 0.03 **bc** | 1.02 ± 0.04 **ab** | 1.52 ± 0.07 **ab** | 2.30 ± 0.12 **a** | 0.56 ± 0.02 | 0.55 ± 0.02 | **Mean****±SEM** | **Total bilirubin (mg/dl)** |
| - 73.47 | - 55.65 | - 33.91 |  | **%** |
| 7.00 ± 0.36 **bc** | 6.50 ± 0.44 **ab** | 5.72 ± 0.27 **ab** | 3.30 ± 0.12 **a** | 7.30 ± 0.23 | 7.33 ± 0.42 | **Mean****±SEM** |  **Total proteins (g/dl)** |
| + 112.12 | + 96.96 | + 73.33 |  | **%** |
| 4.06 ± 0.11 **bc** | 3.81 ± 0.06 **ab** | 3.22 ± 0.14 **ab** | 2.20 ± 0.03 **a** | 4.37 ± 0.09 | 4.20 ± 0.13 | **Mean****±SEM** | **Albumin (g/dl)** |
| + 84.54 | +73.18 | + 46.36 |  | **%** |
| 2.65 ± 0.11 **bc** | 2.35 ± 0.12 **ab** | 1.90± 0.07 **ab** | 1.08 ± 0.12 **a** | 2.80± 0.11 | 2.87 ± 0.10 | **Mean****±SEM** | **Globulins (g/dl)** |
| +145.37 | +117.59 | +75.92 |  | **%** |
| Values expressed as ± SEM (n = 6). a,b & c are Significant differences (P ≤ 0.05) compared to control, diabetic untreated and DPPD-diabetic treated groups, respectively. % is the percent of change compared to the diabetic group as reported in the supplementary tables. |