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APPENDICES

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Table 7 Seven-day body weight of individual control rat

| Rat No. | Day 0 | Day 7 | Day 14 | Day 21 | Day 28 |
|---------|--------|--------|--------|--------|--------|
| 1 | 244.00 | 311.70 | 346.00 | 378.00 | 390.40 |
| 2 | 263.50 | 295.50 | 322.60 | 340.70 | 353.50 |
| 3 | 334.50 | 377.60 | 417.50 | 443.20 | 462.60 |
| 4 | 300.70 | 345.50 | 368.00 | 382.80 | 395.60 |
| 5 | 331.00 | 364.50 | 383.00 | 392.50 | 406.50 |
| 6 | 296.70 | 321.50 | 344.50 | 360.00 | 373.20 |
| 7 | 338.00 | 349.00 | 361.80 | 369.00 | 384.10 |
| 8 | 389.50 | 411.00 | 433.00 | 444.70 | 457.00 |
| 9 | 341.00 | 357.00 | 368.60 | 381.00 | 384.80 |
| 10 | 285.00 | 288.00 | 305.50 | 321.00 | 339.40 |
| Mean | 312.39 | 342.13 | 365.05 | 381.29 | 394.71 |
| SEM | 13.52 | 12.13 | 12.41 | 12.42 | 12.51 |

Unit expressed as g

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Table 8 Seven-day body weight of individual rat in *O. grandiflorus* group I

| Rat No. | Day 0 | Day 7 | Day 14 | Day 21 | Day 28 |
|---------|--------|--------|--------|--------|--------|
| 1 | 235.00 | 284.60 | 299.50 | 314.80 | 327.30 |
| 2 | 245.50 | 273.50 | 298.60 | 318.50 | 332.00 |
| 3 | 305.50 | 325.00 | 344.30 | 366.50 | 380.60 |
| 4 | 289.00 | 304.20 | 309.90 | 327.30 | 334.10 |
| 5 | 276.50 | 289.00 | 295.00 | 273.70 | 258.30 |
| 6 | 401.60 | 441.80 | 457.00 | 463.40 | 467.60 |
| 7 | 328.50 | 358.40 | 365.50 | 386.20 | 399.70 |
| 8 | 378.50 | 406.80 | 398.30 | 444.20 | 437.10 |
| 9 | 424.30 | 431.30 | 436.80 | 442.00 | 445.30 |
| 10 | 360.80 | 376.00 | 380.70 | 392.70 | 407.00 |
| Mean | 324.52 | 349.06 | 358.56 | 372.93 | 378.90 |
| SEM | 20.64 | 19.88 | 18.74 | 20.25 | 20.63 |

Unit expressed as g

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Table 9 Seven-day body weight of individual rat in *O. grandiflorus* group II

| Rat No. | Day 0 | Day 7 | Day 14 | Day 21 | Day 28 |
|---------|--------|--------|--------|--------|--------|
| 1 | 312.00 | 323.80 | 336.90 | 356.40 | 377.20 |
| 2 | 219.50 | 277.00 | 258.00 | 307.20 | 322.20 |
| 3 | 290.00 | 315.60 | 331.90 | 348.40 | 342.50 |
| 4 | 365.00 | 365.50 | 369.00 | 375.10 | 372.40 |
| 5 | 321.00 | 345.70 | 359.00 | 376.90 | 391.80 |
| 6 | 324.00 | 321.00 | 347.00 | 357.80 | 363.00 |
| 7 | 358.60 | 372.80 | 375.80 | 370.70 | 389.00 |
| 8 | 310.00 | 324.20 | 302.90 | 276.80 | 288.30 |
| 9 | 376.70 | 384.30 | 383.50 | 387.80 | 392.60 |
| 10 | 343.60 | 330.50 | 295.80 | 298.50 | 286.20 |
| Mean | 322.04 | 336.04 | 335.98 | 345.56 | 352.52 |
| SEM | 14.31 | 10.05 | 12.65 | 12.00 | 12.97 |

Unit expressed as g

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Table 10 Food consumption of individual control rat

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 24.12 | 17.50 | 20.30 | 18.60 | 17.30 |
| 2 | 24.12 | 17.50 | 20.30 | 18.60 | 17.30 |
| 3 | 19.40 | 22.05 | 23.00 | 23.55 | 18.00 |
| 4 | 19.40 | 22.05 | 23.00 | 23.55 | 18.00 |
| 5 | 15.85 | 19.60 | 18.25 | 23.00 | 17.25 |
| 6 | 15.85 | 19.60 | 18.25 | 23.00 | 17.25 |
| 7 | 20.10 | 13.80 | 17.25 | 27.25 | 20.20 |
| 8 | 20.10 | 13.80 | 17.25 | 27.25 | 20.20 |
| 9 | 32.70 | 15.85 | 19.35 | 17.95 | 15.80 |
| 10 | 32.70 | 15.85 | 19.35 | 17.95 | 15.80 |
| Mean | 22.43 | 17.76 | 19.63 | 22.07 | 17.71 |
| SEM | 1.92 | 0.96 | 0.66 | 1.14 | 0.48 |

Unit expressed as g/day

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Table 11 Food consumption of individual rat in *O. grandiflorus* group I

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 16.95 | 18.05 | 17.10 | 16.55 | 18.70 |
| 2 | 16.95 | 18.05 | 17.10 | 16.55 | 18.70 |
| 3 | 15.20 | 16.90 | 16.40 | 20.65 | 15.15 |
| 4 | 15.20 | 16.90 | 16.40 | 20.65 | 15.15 |
| 5 | 14.70 | 17.00 | 16.90 | 10.10 | 9.40 |
| 6 | 19.90 | 18.30 | 15.70 | 24.10 | 21.50 |
| 7 | 20.55 | 7.90 | 16.55 | 27.90 | 22.25 |
| 8 | 20.55 | 7.90 | 16.55 | 27.90 | 22.25 |
| 9 | 15.60 | 15.00 | 12.80 | 24.20 | 22.70 |
| 10 | 17.00 | 27.90 | 17.90 | 17.30 | 24.00 |
| Mean | 17.26 | 16.39 | 16.34 | 20.59 | 18.98 |
| SEM | 0.72 | 1.79 | 0.43 | 1.78 | 1.45 |

Unit expressed as g/day

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Table 12 Food consumption of individual rat in *O. grandiflorus* group II

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 20.05 | 22.20 | 29.70 | 21.20 | 21.10 |
| 2 | 26.90 | 15.65 | 16.55 | 17.75 | 20.05 |
| 3 | 11.65 | 6.80 | 17.45 | 7.05 | 12.80 |
| 4 | 15.40 | 19.50 | 11.70 | 16.70 | 17.70 |
| 5 | 18.75 | 19.10 | 27.60 | 25.5 | 19.8 |
| 6 | 17.20 | 22.50 | 12.50 | 19.20 | 22.20 |
| 7 | 15.80 | 10.50 | 8.05 | 23.50 | 18.25 |
| 8 | 15.80 | 10.50 | 8.05 | 23.50 | 18.25 |
| 9 | 14.50 | 13.90 | 9.40 | 18.00 | 17.80 |
| 10 | 10.00 | 4.50 | 23.7 | 9.70 | 0.30 |
| Mean | 16.60 | 14.52 | 16.47 | 18.21 | 16.82 |
| SEM | 1.48 | 2.01 | 2.54 | 1.88 | 2.00 |

Unit expressed as g/day

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Table 13 Water consumption of individual control rat

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 45.75 | 35.40 | 43.55 | 36.15 | 41.60 |
| 2 | 45.75 | 35.40 | 43.55 | 36.15 | 41.60 |
| 3 | 37.40 | 45.65 | 48.35 | 49.85 | 40.90 |
| 4 | 37.40 | 45.65 | 48.35 | 49.85 | 40.90 |
| 5 | 37.60 | 52.25 | 47.70 | 51.10 | 44.40 |
| 6 | 37.60 | 52.25 | 47.70 | 51.10 | 44.40 |
| 7 | 33.05 | 28.80 | 31.85 | 39.00 | 29.70 |
| 8 | 33.05 | 28.80 | 31.85 | 39.00 | 29.70 |
| 9 | 31.85 | 24.15 | 33.00 | 30.50 | 27.35 |
| 10 | 31.85 | 24.15 | 33.00 | 30.50 | 27.35 |
| Mean | 37.13 | 37.25 | 40.89 | 41.32 | 36.79 |
| SEM | 1.63 | 3.47 | 2.37 | 2.66 | 2.30 |

Unit expressed as ml/day

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Table 14 Water consumption of individual rat in *O. grandiflorus* group I

| Rat No. | Day 5 | Day10 | Day15 | Day20 | Day25 |
|---------|-------|-------|-------|-------|-------|
| 1 | 41.60 | 29.40 | 29.75 | 29.75 | 33.40 |
| 2 | 41.60 | 29.40 | 29.75 | 29.75 | 33.40 |
| 3 | 29.40 | 43.35 | 39.00 | 41.30 | 28.50 |
| 4 | 29.40 | 43.35 | 39.00 | 41.30 | 28.50 |
| 5 | 29.40 | 32.75 | 35.40 | 18.10 | 25.60 |
| 6 | 31.40 | 30.00 | 27.50 | 32.20 | 45.00 |
| 7 | 38.00 | 31.45 | 33.75 | 46.10 | 43.90 |
| 8 | 38.00 | 31.45 | 33.75 | 46.10 | 43.90 |
| 9 | 17.20 | 18.90 | 14.70 | 30.90 | 25.10 |
| 10 | 28.10 | 31.90 | 27.50 | 29.50 | 94.20 |
| Mean | 32.41 | 32.20 | 31.01 | 34.50 | 40.15 |
| SEM | 2.38 | 2.23 | 2.25 | 2.83 | 6.48 |

Unit expressed as ml/day

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Table 15 Water consumption of individual rat in *O. grandiflorus* group II

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 40.40 | 51.00 | 35.00 | 41.90 | 40.80 |
| 2 | 46.55 | 31.50 | 43.35 | 37.50 | 40.40 |
| 3 | 21.70 | 26.70 | 27.45 | 15.05 | 23.8 |
| 4 | 28.20 | 28.00 | 19.40 | 25.10 | 28.20 |
| 5 | 35.75 | 33.35 | 34.20 | 46.90 | 32.20 |
| 6 | 51.20 | 44.40 | 37.50 | 40.80 | 44.80 |
| 7 | 32.45 | 23.35 | 18.05 | 37.70 | 36.60 |
| 8 | 32.45 | 23.35 | 18.05 | 37.70 | 36.60 |
| 9 | 27.60 | 27.80 | 23.50 | 30.00 | 35.20 |
| 10 | 15.50 | 18.50 | 34.00 | 10.50 | 13.30 |
| Mean | 33.18 | 30.80 | 39.05 | 32.32 | 33.19 |
| SEM | 3.44 | 3.16 | 2.85 | 3.79 | 2.95 |

Unit expressed as ml/day

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Table 16 Relative food consumption of individual control rat

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 0.077 | 0.059 | 0.049 | 0.044 | 0.077 |
| 2 | 0.082 | 0.063 | 0.055 | 0.049 | 0.082 |
| 3 | 0.051 | 0.055 | 0.053 | 0.039 | 0.051 |
| 4 | 0.056 | 0.063 | 0.062 | 0.046 | 0.056 |
| 5 | 0.043 | 0.048 | 0.059 | 0.042 | 0.043 |
| 6 | 0.049 | 0.053 | 0.064 | 0.046 | 0.049 |
| 7 | 0.058 | 0.048 | 0.074 | 0.053 | 0.058 |
| 8 | 0.049 | 0.040 | 0.061 | 0.044 | 0.049 |
| 9 | 0.092 | 0.052 | 0.047 | 0.041 | 0.092 |
| 10 | 0.114 | 0.063 | 0.056 | 0.047 | 0.114 |
| Mean | 0.067 | 0.054 | 0.058 | 0.045 | 0.067 |
| SEM | 0.007 | 0.002 | 0.002 | 0.001 | 0.007 |

Unit expressed as g/body weight/day

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Table 17 Relative food consumption of individual rat in *O. grandiflorus* group I

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 0.060 | 0.057 | 0.053 | 0.057 | 0.060 |
| 2 | 0.062 | 0.057 | 0.052 | 0.056 | 0.062 |
| 3 | 0.047 | 0.048 | 0.056 | 0.040 | 0.047 |
| 4 | 0.050 | 0.053 | 0.063 | 0.045 | 0.050 |
| 5 | 0.051 | 0.057 | 0.037 | 0.036 | 0.051 |
| 6 | 0.045 | 0.034 | 0.052 | 0.046 | 0.045 |
| 7 | 0.057 | 0.045 | 0.072 | 0.056 | 0.057 |
| 8 | 0.051 | 0.042 | 0.063 | 0.051 | 0.051 |
| 9 | 0.036 | 0.029 | 0.055 | 0.051 | 0.036 |
| 10 | 0.045 | 0.047 | 0.044 | 0.059 | 0.045 |
| Mean | 0.050 | 0.047 | 0.055 | 0.050 | 0.050 |
| SEM | 0.002 | 0.003 | 0.003 | 0.002 | 0.002 |

Unit expressed as g/body weight/day

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Table 18 Relative food consumption of individual rat in *O. grandiflorus* group II

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 0.062 | 0.088 | 0.059 | 0.056 | 0.062 |
| 2 | 0.097 | 0.064 | 0.058 | 0.062 | 0.097 |
| 3 | 0.037 | 0.053 | 0.020 | 0.037 | 0.037 |
| 4 | 0.042 | 0.032 | 0.045 | 0.048 | 0.042 |
| 5 | 0.054 | 0.077 | 0.068 | 0.051 | 0.054 |
| 6 | 0.054 | 0.036 | 0.054 | 0.061 | 0.054 |
| 7 | 0.042 | 0.021 | 0.063 | 0.047 | 0.042 |
| 8 | 0.049 | 0.027 | 0.085 | 0.063 | 0.049 |
| 9 | 0.038 | 0.025 | 0.046 | 0.045 | 0.038 |
| 10 | 0.030 | 0.080 | 0.032 | 0.001 | 0.030 |
| Mean | 0.051 | 0.050 | 0.053 | 0.047 | 0.051 |
| SEM | 0.006 | 0.008 | 0.006 | 0.006 | 0.006 |

Unit expressed as g/body weight/day

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Table 19 Relative water consumption of individual control rat

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 0.147 | 0.126 | 0.096 | 0.107 | 0.147 |
| 2 | 0.155 | 0.135 | 0.106 | 0.118 | 0.155 |
| 3 | 0.099 | 0.116 | 0.112 | 0.088 | 0.099 |
| 4 | 0.108 | 0.131 | 0.130 | 0.103 | 0.108 |
| 5 | 0.103 | 0.125 | 0.130 | 0.109 | 0.103 |
| 6 | 0.117 | 0.138 | 0.142 | 0.119 | 0.117 |
| 7 | 0.095 | 0.088 | 0.106 | 0.077 | 0.095 |
| 8 | 0.080 | 0.074 | 0.088 | 0.065 | 0.080 |
| 9 | 0.089 | 0.090 | 0.080 | 0.071 | 0.089 |
| 10 | 0.111 | 0.108 | 0.095 | 0.081 | 0.111 |
| Mean | 0.110 | 0.113 | 0.109 | 0.094 | 0.110 |
| SEM | 0.008 | 0.007 | 0.006 | 0.006 | 0.008 |

Unit expressed as ml/body weight/day

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Table 20 Relative water consumption of individual rat in *O. grandiflorus* group I

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 0.146 | 0.099 | 0.095 | 0.102 | 0.146 |
| 2 | 0.152 | 0.100 | 0.093 | 0.100 | 0.152 |
| 3 | 0.090 | 0.113 | 0.113 | 0.075 | 0.090 |
| 4 | 0.097 | 0.126 | 0.126 | 0.085 | 0.097 |
| 5 | 0.102 | 0.120 | 0.066 | 0.099 | 0.102 |
| 6 | 0.071 | 0.060 | 0.069 | 0.096 | 0.071 |
| 7 | 0.106 | 0.092 | 0.119 | 0.110 | 0.106 |
| 8 | 0.093 | 0.085 | 0.104 | 0.100 | 0.093 |
| 9 | 0.040 | 0.034 | 0.070 | 0.056 | 0.040 |
| 10 | 0.075 | 0.072 | 0.075 | 0.231 | 0.075 |
| Mean | 0.097 | 0.090 | 0.093 | 0.106 | 0.097 |
| SEM | 0.011 | 0.009 | 0.007 | 0.015 | 0.011 |

Unit expressed as ml/body weight/day

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Table 21 Relative water consumption of individual rat in *O. grandiflorus* group II

| Rat No. | Day 5 | Day10 | Day15 | Day 20 | Day 25 |
|---------|-------|-------|-------|--------|--------|
| 1 | 0.125 | 0.104 | 0.118 | 0.108 | 0.125 |
| 2 | 0.168 | 0.168 | 0.122 | 0.125 | 0.168 |
| 3 | 0.069 | 0.083 | 0.043 | 0.069 | 0.069 |
| 4 | 0.077 | 0.053 | 0.067 | 0.076 | 0.077 |
| 5 | 0.103 | 0.095 | 0.124 | 0.082 | 0.103 |
| 6 | 0.160 | 0.108 | 0.114 | 0.123 | 0.160 |
| 7 | 0.087 | 0.048 | 0.102 | 0.094 | 0.087 |
| 8 | 0.100 | 0.060 | 0.136 | 0.127 | 0.1007 |
| 9 | 0.072 | 0.061 | 0.077 | 0.090 | 0.072 |
| 10 | 0.047 | 0.115 | 0.035 | 0.046 | 0.047 |
| Mean | 0.101 | 0.089 | 0.094 | 0.094 | 0.100 |
| SEM | 0.013 | 0.012 | 0.011 | 0.008 | 0.013 |

Unit expressed as ml/body weight/day

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Table 22 Terminal body weight of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 376.80 | 325.60 | 373.20 |
| 2 | 342.60 | 334.50 | 306.20 |
| 3 | 441.80 | 345.80 | 308.70 |
| 4 | 381.20 | 319.40 | 369.60 |
| 5 | 389.60 | 239.30 | 374.30 |
| 6 | 356.50 | 463.50 | 360.40 |
| 7 | 364.00 | 385.70 | 360.40 |
| 8 | 442.30 | 442.80 | 280.70 |
| 9 | 375.00 | 445.50 | 392.20 |
| 10 | 333.30 | 403.70 | 286.20 |
| Average | 380.31 | 370.58 | 341.19 |
| SEM | 11.65 | 22.26 | 13.01 |

Unit expressed as g

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Table 23 Liver weight of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 10.69 | 11.76 | 13.90 |
| 2 | 10.89 | 10.50 | 8.48 |
| 3 | 13.59 | 12.07 | 10.30 |
| 4 | 11.12 | 9.49 | 14.76 |
| 5 | 12.58 | 6.12 | 16.03 |
| 6 | 11.25 | 16.73 | 12.46 |
| 7 | 12.81 | 14.98 | 11.87 |
| 8 | 17.28 | 18.06 | 8.13 |
| 9 | 11.33 | 15.13 | 13.64 |
| 10 | 12.26 | 13.75 | 12.01 |
| Average | 12.38 | 12.86 | 12.16 |
| SEM | 0.62 | 1.14 | 0.82 |

Unit expressed as g

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Table 24 Serum AST concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 159 | 205 | 83 |
| 2 | 196 | 231 | 168 |
| 3 | 124 | 169 | 186 |
| 4 | 169 | 192 | 149 |
| 5 | 123 | 189 | 178 |
| 6 | 120 | 95 | 102 |
| 7 | 152 | 122 | 144 |
| 8 | 130 | 146 | 160 |
| 9 | 106 | 121 | 125 |
| 10 | 112 | 109 | 218 |
| Average | 139.10 | 157.90 | 151.30 |
| SEM | 9.10 | 14.51 | 12.72 |

Unit expressed as U/L

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Table 25 Serum ALT concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 41 | 63 | 44 |
| 2 | 45 | 52 | 42 |
| 3 | 48 | 44 | 43 |
| 4 | 47 | 57 | 45 |
| 5 | 38 | 99 | 57 |
| 6 | 49 | 31 | 47 |
| 7 | 49 | 45 | 42 |
| 8 | 46 | 50 | 47 |
| 9 | 38 | 41 | 50 |
| 10 | 45 | 49 | 69 |
| Average | 44.60 | 53.10 | 48.60 |
| SEM | 1.33 | 5.80 | 2.68 |

Unit expressed as U/L

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Table 26 Serum ALP concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 95 | 151 | 137 |
| 2 | 158 | 161 | 115 |
| 3 | 98 | 112 | 87 |
| 4 | 87 | 90 | 125 |
| 5 | 91 | 147 | 107 |
| 6 | 96 | 145 | 174 |
| 7 | 111 | 92 | 98 |
| 8 | 106 | 128 | 105 |
| 9 | 87 | 138 | 143 |
| 10 | 146 | 139 | 174 |
| Average | 107.50 | 130.30 | 126.50 |
| SEM | 7.84 | 7.77 | 9.57 |

Unit expressed as U/L

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Table 27 Serum total bilirubin concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 0.1 | 0.1 | 0.1 |
| 2 | 0.1 | 0.1 | 0.1 |
| 3 | 0.1 | 0.1 | 0.1 |
| 4 | 0.1 | 0.1 | 0.1 |
| 5 | 0.1 | 0.1 | 0.1 |
| 6 | 0.1 | 0.1 | 0.1 |
| 7 | 0.1 | 0.1 | 0.1 |
| 8 | 0.1 | 0.1 | 0.1 |
| 9 | 0.1 | 0.1 | 0.1 |
| 10 | 0.1 | 0.1 | 0.1 |
| Average | 0.10 | 0.10 | 0.10 |
| SEM | 0.00 | 0.00 | 0.00 |

Unit expressed as mg/dl

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Table 28 Serum direct bilirubin concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 0.0 | 0.0 | 0.0 |
| 2 | 0.1 | 0.0 | 0.0 |
| 3 | 0.0 | 0.0 | 0.0 |
| 4 | 0.0 | 0.0 | 0.0 |
| 5 | 0.0 | 0.0 | 0.0 |
| 6 | 0.0 | 0.0 | 0.0 |
| 7 | 0.0 | 0.0 | 0.1 |
| 8 | 0.0 | 0.0 | 0.1 |
| 9 | 0.0 | 0.0 | 0.0 |
| 10 | 0.0 | 0.0 | 0.0 |
| Average | 0.01 | 0.00 | 0.02 |
| SEM | 0.01 | 0.00 | 0.01 |

Unit expressed as mg/dl

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Table 29 Total protein of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 6.9 | 6.5 | 6.7 |
| 2 | 6.8 | 6.2 | 6.6 |
| 3 | 6.3 | 6.5 | 6.2 |
| 4 | 6.8 | 6.4 | 6.8 |
| 5 | 6.7 | 6.6 | 7.4 |
| 6 | 6.5 | 6.6 | 6.5 |
| 7 | 6.2 | 6.7 | 6.7 |
| 8 | 6.6 | 6.4 | 6.9 |
| 9 | 7.1 | 6.7 | 6.3 |
| 10 | 6.6 | 6.7 | 6.5 |
| Average | 6.65 | 6.53 | 6.66 |
| SEM | 0.09 | 0.05 | 0.11 |

Unit expressed g/dl

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Table 30 Albumin of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 3.8 | 3.6 | 3.4 |
| 2 | 3.8 | 3.5 | 3.6 |
| 3 | 3.5 | 3.4 | 3.4 |
| 4 | 3.9 | 3.5 | 3.3 |
| 5 | 3.5 | 3.0 | 4.2 |
| 6 | 3.4 | 3.3 | 3.2 |
| 7 | 3.2 | 3.7 | 3.3 |
| 8 | 3.7 | 3.4 | 3.6 |
| 9 | 3.8 | 3.2 | 3.1 |
| 10 | 3.3 | 3.4 | 3.1 |
| Average | 3.59 | 3.40 | 3.42 |
| SEM | 0.08 | 0.06 | 0.10 |

Unit expressed g/dl

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Table 31 Globulin of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 3.1 | 2.9 | 3.3 |
| 2 | 3.0 | 2.7 | 3.0 |
| 3 | 2.8 | 3.1 | 2.8 |
| 4 | 2.9 | 2.9 | 3.5 |
| 5 | 3.2 | 3.6 | 3.2 |
| 6 | 3.1 | 3.3 | 3.3 |
| 7 | 3.0 | 3.0 | 3.4 |
| 8 | 2.9 | 3.0 | 3.3 |
| 9 | 3.3 | 3.5 | 3.2 |
| 10 | 3.3 | 3.3 | 3.4 |
| Average | 3.06 | 3.13 | 3.24 |
| SEM | 0.05 | 0.09 | 0.07 |

Unit expressed g/dl

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Table 32 BUN concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 15 | 19 | 22 |
| 2 | 18 | 25 | 18 |
| 3 | 21 | 21 | 19 |
| 4 | 22 | 20 | 29 |
| 5 | 12 | 20 | 18 |
| 6 | 14 | 19 | 29 |
| 7 | 19 | 17 | 21 |
| 8 | 17 | 15 | 32 |
| 9 | 21 | 23 | 26 |
| 10 | 20 | 20 | 22 |
| Average | 17.90 | 19.90 | 23.60* |
| SEM | 1.06 | 0.89 | 1.60 |

Unit expressed as mg/dl

* $p < 0.05$; *O. grandiflorus* group vs control group

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Table 33 Serum creatinine concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 0.5 | 0.6 | 0.7 |
| 2 | 0.6 | 0.7 | 0.5 |
| 3 | 0.5 | 0.7 | 0.8 |
| 4 | 0.8 | 0.8 | 0.7 |
| 5 | 0.6 | 0.6 | 0.7 |
| 6 | 0.5 | 0.6 | 0.7 |
| 7 | 0.6 | 0.5 | 0.7 |
| 8 | 0.6 | 0.6 | 0.8 |
| 9 | 0.6 | 0.6 | 0.6 |
| 10 | 0.6 | 0.6 | 0.5 |
| Average | 0.59 | 0.63 | 0.67 |
| SEM | 0.03 | 0.03 | 0.03 |

Unit expressed as mg/dl

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Table 34 Serum sodium concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 151 | 151 | 145 |
| 2 | 161 | 158 | 161 |
| 3 | 149 | 147 | 149 |
| 4 | 150 | 148 | 147 |
| 5 | 150 | 147 | 152 |
| 6 | 150 | 145 | 146 |
| 7 | 145 | 146 | 148 |
| 8 | 150 | 146 | 146 |
| 9 | 143 | 146 | 145 |
| 10 | 145 | 144 | 143 |
| Average | 149.40 | 147.80 | 148.20 |
| SEM | 1.56 | 1.28 | 1.62 |

Unit expressed as mEq/L

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Table 35 Serum potassium concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 4.5 | 4.3 | 4.0 |
| 2 | 5.4 | 4.6 | 4.9 |
| 3 | 4.7 | 4.7 | 4.7 |
| 4 | 4.1 | 3.9 | 5.6 |
| 5 | 3.9 | 4.8 | 5.0 |
| 6 | 4.4 | 5.3 | 6.0 |
| 7 | 4.4 | 4.2 | 4.9 |
| 8 | 3.9 | 4.6 | 5.6 |
| 9 | 4.5 | 5.2 | 6.2 |
| 10 | 4.5 | 5.0 | 4.3 |
| Average | 4.43 | 4.66 | 5.12* |
| SEM | 0.14 | 0.14 | 0.23 |

Unit expressed as mEq/L

* $p < 0.05$; *O. grandiflorus* group vs control group

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Table 36 Serum chloride concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 105 | 108 | 102 |
| 2 | 115 | 112 | 114 |
| 3 | 107 | 106 | 103 |
| 4 | 104 | 105 | 108 |
| 5 | 105 | 104 | 104 |
| 6 | 108 | 107 | 109 |
| 7 | 106 | 106 | 104 |
| 8 | 108 | 105 | 105 |
| 9 | 102 | 107 | 109 |
| 10 | 104 | 106 | 99 |
| Average | 106.40 | 106.60 | 105.70 |
| SEM | 1.13 | 0.70 | 1.37 |

Unit expressed as mEq/L

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Table 37 Serum calcium concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 10.0 | 9.9 | 9.5 |
| 2 | 10.7 | 10.6 | 10.4 |
| 3 | 10.3 | 9.9 | 10.0 |
| 4 | 9.6 | 9.4 | 9.3 |
| 5 | 9.8 | 9.4 | 10.1 |
| 6 | 9.7 | 9.5 | 9.4 |
| 7 | 9.5 | 9.9 | 10.3 |
| 8 | 9.9 | 9.6 | 10.2 |
| 9 | 10.2 | 10.0 | 9.7 |
| 10 | 9.6 | 10.2 | 9.9 |
| Average | 9.93 | 9.84 | 9.88 |
| SEM | 0.12 | 0.12 | 0.12 |

Unit expressed as mg/dl

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Table 38 Serum uric acid concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 1.2 | 0.6 | 0.6 |
| 2 | 1.4 | 2.3 | 1.1 |
| 3 | 1.0 | 1.1 | 1.3 |
| 4 | 0.9 | 0.8 | 1.5 |
| 5 | 0.7 | 1.4 | 1.7 |
| 6 | 1.1 | 1.6 | 1.3 |
| 7 | 0.6 | 0.7 | 1.3 |
| 8 | 1.0 | 1.2 | 2.2 |
| 9 | 1.5 | 1.0 | 1.5 |
| 10 | 1.1 | 1.2 | 1.0 |
| Average | 1.05 | 1.19 | 1.35 |
| SEM | 0.09 | 0.16 | 0.14 |

Unit expressed as mg/dl

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Table 39 Serum total cholesterol concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 74 | 63 | 84 |
| 2 | 88 | 63 | 72 |
| 3 | 61 | 67 | 50 |
| 4 | 68 | 52 | 81 |
| 5 | 79 | 90 | 56 |
| 6 | 82 | 83 | 53 |
| 7 | 59 | 85 | 106 |
| 8 | 60 | 72 | 66 |
| 9 | 68 | 88 | 78 |
| 10 | 68 | 75 | 106 |
| Average | 70.70 | 73.80 | 75.20 |
| SEM | 3.12 | 3.99 | 6.33 |

Unit expressed as mg/dl

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Table 40 Serum triglyceride concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 92 | 89 | 113 |
| 2 | 93 | 65 | 101 |
| 3 | 118 | 93 | 63 |
| 4 | 78 | 65 | 111 |
| 5 | 80 | 57 | 152 |
| 6 | 148 | 79 | 81 |
| 7 | 109 | 109 | 64 |
| 8 | 148 | 129 | 90 |
| 9 | 79 | 151 | 45 |
| 10 | 80 | 97 | 54 |
| Average | 102.50 | 93.40 | 87.40 |
| SEM | 8.68 | 9.43 | 10.37 |

Unit expressed as mg/dl

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Table 41 Serum LDL-C concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 2 | 3 | 5 |
| 2 | 4 | 6 | 4 |
| 3 | 1 | 4 | 3 |
| 4 | 4 | 3 | 7 |
| 5 | 5 | 11 | 2 |
| 6 | 2 | 7 | 5 |
| 7 | 2 | 3 | 8 |
| 8 | 1 | 2 | 3 |
| 9 | 6 | 4 | 9 |
| 10 | 6 | 6 | - |
| Average | 3.30 | 4.90 | 5.11 |
| SEM | 0.62 | 0.85 | 0.81 |

Unit expressed as mg/dl

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Table 42 Serum HDL-C concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 63 | 56 | 70 |
| 2 | 74 | 56 | 63 |
| 3 | 58 | 61 | 49 |
| 4 | 66 | 51 | 65 |
| 5 | 70 | 74 | 51 |
| 6 | 71 | 70 | 45 |
| 7 | 54 | 73 | 83 |
| 8 | 54 | 65 | 60 |
| 9 | 61 | 70 | 62 |
| 10 | 60 | 65 | 78 |
| Average | 63.10 | 64.10 | 62.60 |
| SEM | 2.22 | 2.50 | 3.87 |

Unit expressed as mg/dl

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Table 43 Serum glucose concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 123 | 93 | 125 |
| 2 | 107 | 201 | 111 |
| 3 | 113 | 100 | 90 |
| 4 | 84 | 86 | 117 |
| 5 | 102 | 63 | 106 |
| 6 | 128 | 132 | 116 |
| 7 | 105 | 103 | 106 |
| 8 | 111 | 118 | 102 |
| 9 | 95 | 137 | 121 |
| 10 | 113 | 102 | 124 |
| Average | 108.10 | 113.50 | 111.80 |
| SEM | 4.05 | 11.89 | 3.48 |

Unit expressed as mg/dl

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Table 44 Hematocrit of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 46 | - | 47 |
| 2 | 44 | 44 | 53 |
| 3 | 44 | 44 | 46 |
| 4 | 55 | 54 | 47 |
| 5 | 44 | 46 | 54 |
| 6 | 44 | 50 | 49 |
| 7 | 46 | 50 | 50 |
| 8 | 46 | 51 | 46 |
| 9 | 51 | 47 | 46 |
| 10 | 50 | 50 | 44 |
| Average | 47.00 | 48.44 | 48.20 |
| SEM | 1.19 | 1.13 | 1.03 |

Unit expressed as %

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Table 45 Hemoglobin of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 14.5 | - | 15.0 |
| 2 | 14.2 | 14.3 | 17.3 |
| 3 | 13.9 | 14.5 | 14.7 |
| 4 | 17.4 | 18.0 | 14.9 |
| 5 | 14.4 | 15.1 | 17.1 |
| 6 | 14.3 | 15.6 | 15.7 |
| 7 | 14.6 | 15.8 | 16.0 |
| 8 | 15.2 | 14.8 | 13.0 |
| 9 | 16.6 | 8.9 | 14.9 |
| 10 | 15.8 | 15.7 | 14.4 |
| Average | 15.09 | 14.74 | 15.30 |
| SEM | 0.37 | 0.82 | 0.40 |

Unit expressed as g/dl

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Table 46 Platelet count of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 682 | - | 774 |
| 2 | 618 | 1,010 | 924 |
| 3 | 846 | 872 | 806 |
| 4 | 860 | 928 | 752 |
| 5 | 796 | 1,066 | 870 |
| 6 | 784 | 752 | 702 |
| 7 | 650 | 734 | 868 |
| 8 | 486 | 704 | 718 |
| 9 | 1,112 | 746 | 710 |
| 10 | 716 | 712 | 1,034 |
| Average | 755.00 | 836.00 | 815.80 |
| SEM | 53.57 | 45.84 | 34.09 |

Unit expressed as $\times 10^3$ cells/cumm

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Table 47 WBC count of individual rat

| Rat No. | Group | | |
|---------|----------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 492 | - | 512 |
| 2 | 2,440 | 2,640 | 682 |
| 3 | 1,742 | 1,750 | 3,300 |
| 4 | 1,804 | 2,240 | 866 |
| 5 | 1,900 | 2,580 | 1,598 |
| 6 | 906 | 1,660 | 1,220 |
| 7 | 2,560 | 2,420 | 2,960 |
| 8 | 3,060 | 1,560 | 1,580 |
| 9 | 2,500 | 1,040 | 1,130 |
| 10 | 1,334 | 480 | 1,332 |
| Average | 1,873.80 | 1,818.89 | 1,518.00 |
| SEM | 252.78 | 244.05 | 292.03 |

Unit expressed as cells/cumm

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Table 48 RBC count of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 8.10 | - | 8.74 |
| 2 | 7.98 | 7.86 | 9.76 |
| 3 | 7.98 | 8.20 | 8.12 |
| 4 | 9.50 | 9.50 | 8.52 |
| 5 | 7.74 | 8.70 | 9.48 |
| 6 | 8.10 | 8.56 | 8.66 |
| 7 | 7.34 | 7.62 | 8.12 |
| 8 | 8.46 | 8.30 | 7.02 |
| 9 | 9.50 | 8.98 | 8.52 |
| 10 | 9.00 | 9.16 | 7.70 |
| Average | 8.37 | 8.54 | 8.46 |
| SEM | 0.23 | 0.20 | 0.25 |

Unit expressed as $\times 10^6$ cells/cumm

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Table 49 RBC indices (MCV, MCH and MCHC) of individual control rat

| Rat No. | RBC indices | | |
|---------|-------------|-------|-------|
| | MCV | MCH | MCHC |
| 1 | 56.4 | 17.9 | 31.7 |
| 2 | 55.5 | 17.8 | 32.1 |
| 3 | 55.0 | 17.5 | 31.8 |
| 4 | 57.6 | 18.3 | 31.8 |
| 5 | 57.5 | 18.6 | 32.4 |
| 6 | 54.0 | 17.7 | 32.7 |
| 7 | 62.9 | 19.9 | 31.6 |
| 8 | 54.8 | 18.0 | 32.8 |
| 9 | 53.2 | 17.5 | 32.9 |
| 10 | 56.0 | 17.6 | 31.5 |
| Average | 56.29 | 18.08 | 32.13 |
| SEM | 0.86 | 0.23 | 0.17 |

Unit expressed as fL (for MCV), pg (for MCH) and g/dl (for MCHC)

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Table 50 RBC indices (MCV, MCH and MCHC) of individual rat in *O. grandiflorus* group I

| Rat No. | RBC indices | | |
|---------|-------------|-------|-------|
| | MCV | MCH | MCHC |
| 1 | - | - | - |
| 2 | 55.7 | 18.2 | 32.7 |
| 3 | 53.7 | 17.6 | 32.8 |
| 4 | 57.2 | 19.0 | 33.1 |
| 5 | 53.4 | 17.4 | 32.5 |
| 6 | 57.8 | 18.1 | 31.4 |
| 7 | 65.1 | 20.7 | 31.9 |
| 8 | 61.7 | 17.8 | 28.9 |
| 9 | 52.8 | 16.6 | 31.4 |
| 10 | 54.6 | 17.1 | 34.4 |
| Average | 56.89 | 18.06 | 32.12 |
| SEM | 1.38 | 0.40 | 0.51 |

Unit expressed as fL (for MCV), pg (for MCH) and g/dl (for MCHC)

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Table 51 RBC indices (MCV, MCH and MCHC) of individual rat in *O. grandiflorus* group II

| Rat No. | RBC indices | | |
|---------|-------------|-------|-------|
| | MCV | MCH | MCHC |
| 1 | 53.8 | 17.1 | 31.8 |
| 2 | 54.2 | 17.7 | 32.6 |
| 3 | 56.8 | 18.1 | 31.8 |
| 4 | 54.7 | 17.6 | 32.1 |
| 5 | 57.0 | 18.0 | 31.6 |
| 6 | 55.6 | 18.1 | 32.1 |
| 7 | 61.3 | 19.7 | 32.1 |
| 8 | 65.8 | 18.5 | 28.1 |
| 9 | 53.6 | 17.5 | 32.6 |
| 10 | 57.1 | 18.7 | 32.8 |
| Average | 56.99 | 18.10 | 31.76 |
| SEM | 1.22 | 0.23 | 0.43 |

Unit expressed as fL (for MCV), pg (for MCH) and g/dl (for MCHC)

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Table 52 RBC morphology of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | Normal | - | Normal |
| 2 | Normal | Normal | Normal |
| 3 | Normal | Normal | Normal |
| 4 | Normal | Normal | Normal |
| 5 | Normal | Normal | Normal |
| 6 | Normal | Normal | Normal |
| 7 | Normal | Normal | Normal |
| 8 | Normal | Normal | Normal |
| 9 | Normal | Normal | Normal |
| 10 | Normal | Normal | Normal |

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Table 53 Percent differential WBCs of individual control rat

| Rat No. | % differential WBCs | | | | |
|---------|---------------------|------------|----------|------------|----------|
| | PMN | Eosinophil | Basophil | Lymphocyte | Monocyte |
| 1 | 11 | 3 | 0 | 84 | 2 |
| 2 | 22 | 4 | 0 | 72 | 2 |
| 3 | 27 | 1 | 0 | 70 | 2 |
| 4 | 17 | 0 | 0 | 80 | 3 |
| 5 | 28 | 0 | 0 | 67 | 5 |
| 6 | 40 | 2 | 0 | 57 | 1 |
| 7 | 28 | 1 | 0 | 68 | 3 |
| 8 | 10 | 1 | 0 | 77 | 2 |
| 9 | 27 | 1 | 0 | 70 | 2 |
| 10 | 26 | 0 | 0 | 70 | 4 |
| Average | 23.60 | 1.30 | 0.00 | 71.50 | 2.60 |
| SEM | 2.84 | 0.42 | 0.00 | 2.38 | 0.37 |

Unit expressed as %

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Table 54 Percent differential WBCs of individual rat in *O. grandiflorus* group I

| Rat No. | % differential WBCs | | | | |
|---------|---------------------|------------|----------|------------|----------|
| | PMN | Eosinophil | Basophil | Lymphocyte | Monocyte |
| 1 | - | - | - | - | - |
| 2 | 22 | 4 | 0 | 72 | 2 |
| 3 | 34 | 0 | 0 | 65 | 1 |
| 4 | 29 | 0 | 0 | 70 | 1 |
| 5 | 50 | 0 | 0 | 43 | 7 |
| 6 | 29 | 3 | 0 | 68 | 0 |
| 7 | 14 | 1 | 0 | 80 | 5 |
| 8 | 33 | 1 | 0 | 65 | 1 |
| 9 | 43 | 2 | 0 | 55 | 0 |
| 10 | 70 | 0 | 0 | 28 | 2 |
| Average | 36.00 | 1.22 | 0.00 | 60.67 | 2.11 |
| SEM | 5.52 | 0.49 | 0.00 | 5.39 | 0.79 |

Unit expressed as %

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Table 55 Percent differential WBCs of individual rat in *O. grandiflorus* group II

| Rat No. | % differential WBCs | | | | |
|---------|---------------------|------------|----------|------------|----------|
| | PMN | Eosinophil | Basophil | Lymphocyte | Monocyte |
| 1 | 61 | 0 | 0 | 35 | 4 |
| 2 | 68 | 5 | 0 | 24 | 3 |
| 3 | 25 | 0 | 0 | 73 | 2 |
| 4 | 33 | 4 | 0 | 63 | 0 |
| 5 | 30 | 1 | 0 | 63 | 6 |
| 6 | 36 | 3 | 0 | 61 | 0 |
| 7 | 32 | 2 | 0 | 62 | 4 |
| 8 | 36 | 1 | 0 | 60 | 3 |
| 9 | 42 | 1 | 0 | 57 | 0 |
| 10 | 43 | 1 | 0 | 54 | 2 |
| Average | 40.60* | 1.80 | 0.00 | 55.20* | 2.40 |
| SEM | 4.35 | 0.53 | 0.00 | 4.63 | 0.64 |

Unit expressed as %

* $p < 0.05$; *O. grandiflorus* group vs control group

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Table 56 Microsomal protein concentration of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 29.26 | 10.42 | 43.15 |
| 2 | 30.28 | 33.80 | 25.93 |
| 3 | 25.56 | 19.54 | 13.98 |
| 4 | 35.65 | 28.33 | 35.46 |
| 5 | 18.65 | 10.56 | 24.84 |
| 6 | 38.35 | 44.96 | 42.69 |
| 7 | 23.81 | 39.28 | 37.01 |
| 8 | 36.91 | 41.65 | 21.24 |
| 9 | 41.55 | 50.73 | 38.66 |
| 10 | 41.14 | 51.76 | 20.82 |
| Average | 32.12 | 33.10 | 30.38 |
| SEM | 2.47 | 4.88 | 3.24 |

Unit expressed as mg/ml

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Table 57 Hepatic microsomal total CYP content of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 0.495 | 0.577 | 0.396 |
| 2 | 0.725 | 0.637 | 0.544 |
| 3 | 0.560 | 0.560 | 0.560 |
| 4 | 0.615 | 0.516 | 0.429 |
| 5 | 0.615 | 0.434 | 0.418 |
| 6 | 0.420 | 0.489 | 0.423 |
| 7 | 0.670 | 0.514 | 0.448 |
| 8 | 0.505 | 0.538 | 0.354 |
| 9 | 0.453 | 0.401 | 0.459 |
| 10 | 0.481 | 0.431 | 0.286 |
| Average | 0.554 | 0.510 | 0.432* |
| SEM | 0.032 | 0.023 | 0.026 |

Unit expressed as nmol/mg protein

* $p < 0.05$; *O. grandiflorus* group vs control group

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Table 58 Hepatic microsomal EROD activity of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 11 | 15 | 21 |
| 2 | 15 | 14 | 18 |
| 3 | 24 | 31 | 13 |
| 4 | 11 | 15 | 18 |
| 5 | 11 | 17 | 24 |
| 6 | 32 | 37 | 54 |
| 7 | 56 | 29 | 27 |
| 8 | 28 | 26 | 27 |
| 9 | 34 | 24 | 38 |
| 10 | 54 | 31 | 44 |
| Average | 27.60 | 23.90 | 28.40 |
| SEM | 5.34 | 2.60 | 4.11 |

Unit expressed as pmol/mg protein/min

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Table 59 Hepatic microsomal MROD activity of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 3 | 6 | 4 |
| 2 | 13 | 11 | 11 |
| 3 | 7 | 8 | 8 |
| 4 | 7 | 10 | 9 |
| 5 | 8 | 16 | 6 |
| 6 | 9 | 10 | 15 |
| 7 | 11 | 7 | 7 |
| 8 | 7 | 5 | 7 |
| 9 | 7 | 5 | 13 |
| 10 | 10 | 7 | 14 |
| Average | 8.20 | 8.50 | 9.40 |
| SEM | 0.87 | 1.07 | 1.17 |

Unit expressed as pmol/mg protein/min

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Table 60 Hepatic microsomal BROD activity of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 8 | 23 | 23 |
| 2 | 32 | 25 | 35 |
| 3 | 13 | 24 | 26 |
| 4 | 21 | 28 | 49 |
| 5 | 23 | 15 | 21 |
| 6 | 16 | 26 | 59 |
| 7 | 37 | 16 | 15 |
| 8 | 20 | 16 | 21 |
| 9 | 16 | 12 | 20 |
| 10 | 29 | 25 | 18 |
| Average | 21.50 | 21.00 | 28.70 |
| SEM | 2.84 | 1.78 | 4.60 |

Unit expressed as pmol/mg protein/min

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Table 61 Hepatic microsomal PROD activity of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 6 | 8 | 6 |
| 2 | 2 | 3 | 4 |
| 3 | 2 | 2 | 2 |
| 4 | 2 | 2 | 3 |
| 5 | 1 | 1 | 2 |
| 6 | 3 | 7 | 13 |
| 7 | 11 | 5 | 5 |
| 8 | 7 | 6 | 8 |
| 9 | 5 | 4 | 5 |
| 10 | 9 | 7 | 6 |
| Average | 4.80 | 4.50 | 5.40 |
| SEM | 1.07 | 0.78 | 1.03 |

Unit expressed as pmol/mg protein/min

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Table 62 Hepatic microsomal aniline 4-hydroxylase activity of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 0.158 | 0.196 | 0.054 |
| 2 | 0.119 | 0.099 | 0.152 |
| 3 | 0.065 | 0.163 | 0.160 |
| 4 | 0.052 | 0.077 | 0.092 |
| 5 | 0.127 | 0.138 | 0.081 |
| 6 | 0.069 | 0.058 | 0.077 |
| 7 | 0.092 | 0.038 | 0.069 |
| 8 | 0.042 | 0.038 | 0.048 |
| 9 | 0.051 | 0.092 | 0.053 |
| 10 | 0.051 | 0.038 | 0.054 |
| Average | 0.083 | 0.094 | 0.084 |
| SEM | 0.013 | 0.018 | 0.013 |

Unit expressed as nmol/mg protein/min

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Table 63 Hepatic microsomal erythromycin *N*-demethylase activity of individual rat

| Rat No. | Group | | |
|---------|---------|-----------------------------------|------------------------------------|
| | Control | <i>O. grandiflorus</i> group I | <i>O. grandiflorus</i> group II |
| 1 | 0.673 | 0.931 | 0.809 |
| 2 | 0.683 | 0.840 | 0.749 |
| 3 | 1.042 | 1.020 | 0.997 |
| 4 | 0.891 | 0.952 | 0.919 |
| 5 | 0.863 | 1.194 | 0.655 |
| 6 | 0.880 | 0.451 | 0.807 |
| 7 | 1.073 | 0.963 | 0.762 |
| 8 | 1.138 | 0.725 | 0.878 |
| 9 | 1.267 | 0.744 | 1.420 |
| 10 | 1.226 | 0.494 | 0.859 |
| Average | 0.974 | 0.831 | 0.886 |
| SEM | 0.066 | 0.074 | 0.067 |

Unit expressed as nmol/mg protein/min

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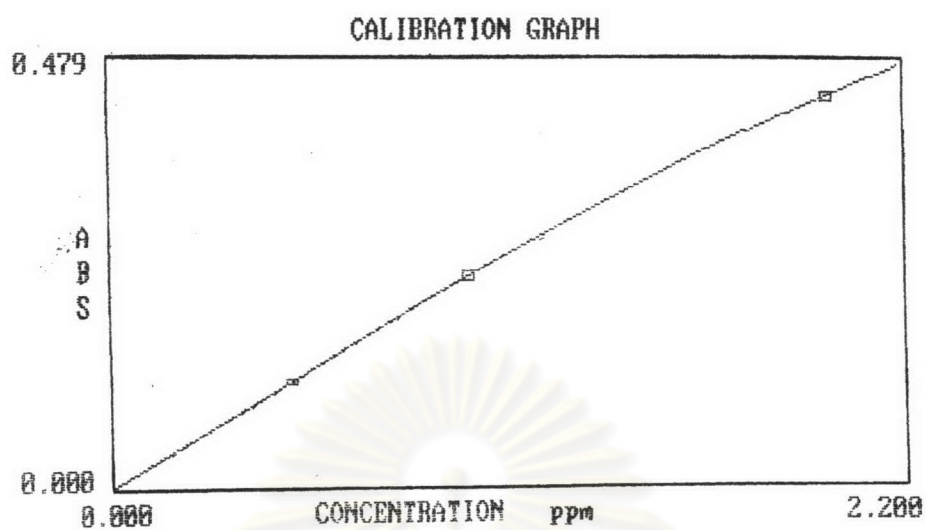


Figure 34 Calibration graph of potassium content was determined using atomic absorption spectrophotometer.

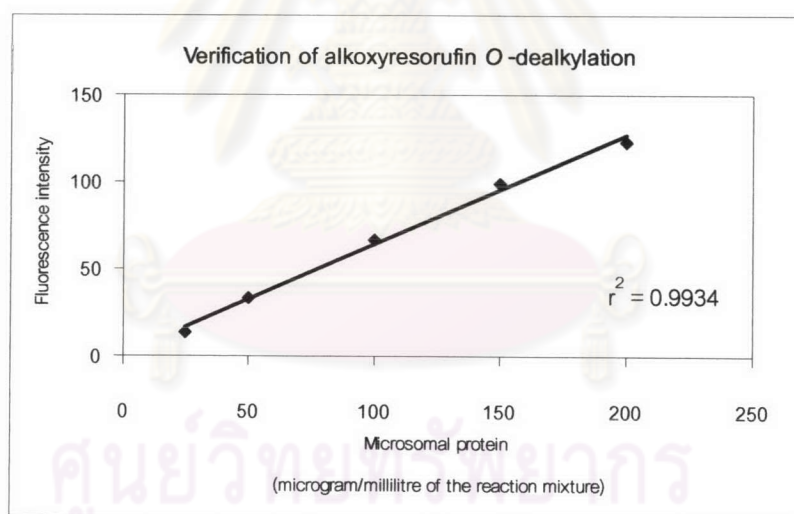


Figure 35 Verification of alkoxyresorufin O-dealkylation.

Correlation between the amount of microsomal protein used in the reaction and fluorometric intensity was shown with a correlation coefficient (r^2) of 0.9934. Each point was the mean value of $n = 2$. Method of the verification was described under materials and methods (page 46).

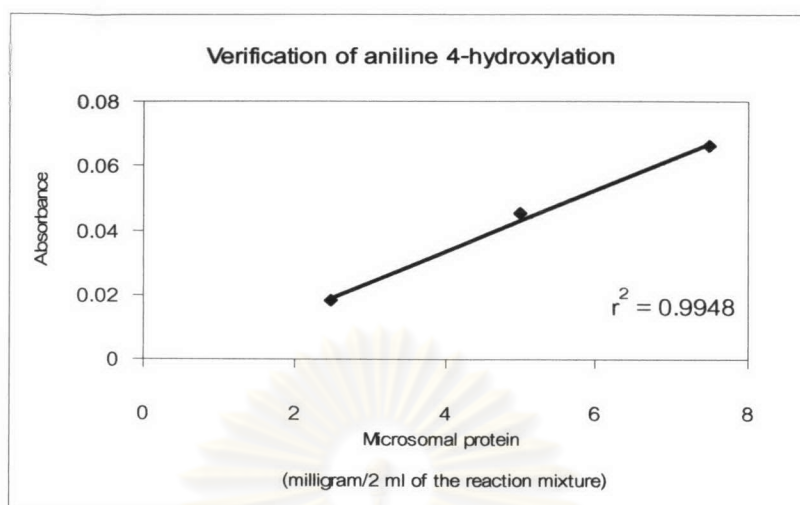


Figure 36 Verification of aniline 4-hydroxylation.

Correlation between the amount of microsomal protein used in the reaction and absorbance was shown with a correlation coefficient (r^2) of 0.9948. Each point was the mean value of $n = 2$. Method of the verification was described under materials and methods (page 48).

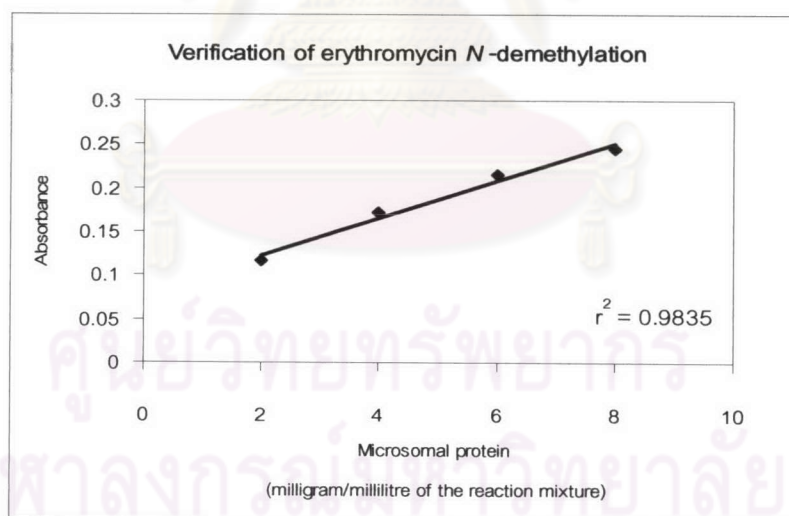


Figure 37 Verification of erythromycin N-demethylation.

Correlation between the amount of microsomal protein used in the reaction and absorbance was shown with a correlation coefficient (r^2) of 0.9835. Each point was the mean value of $n = 2$. Method of the verification was described under materials and methods (page 50).

NO. 50/ 2005



Study Protocol Approval

The Ethics Committee of the Faculty of Pharmaceutical Sciences, Chulalongkorn University, Bangkok, Thailand has approved the following study to be carried out according to the protocol dated and/ or amended as follows :

Study Title : SUBACUTE EFFECTS OF *ORTHOSIPHON GRANDIFLORUS* AQUEOUS EXTRACT ON HEPATIC CYTOCHROME P450 AND CLINICAL BLOOD CHEMISTRY IN RATS

Study Code : -

Centre : Chulalongkorn University

Principal Investigator : MISS TANARAT CHAIYO

Protocol Date : February 21, 2005

A list of the Ethics Committee members and positions present at the Ethics Committee meeting on the date of approval of this study has been attached.

This Study Protocol Approval Form will be forwarded to the Principal Investigator.

Chairman of Ethics Committee :

Boonyong Tantisira
.....
(Boonyong Tantisira, Ph.D.)

Secretary of Ethics Committee :

S. Vadcharavivad
.....
(Somratai Vadcharavivad, Pharm.D.)

Date of Approval :

February 21, 2005

Table 64 Normal lab values of rats (Chengelis, C.P., 1992; Harkness, J.E. and Wagner, J.E., 1995).

| Parameter | Lab values | Units |
|-------------------|------------|--------------------------|
| AST | 60-300 | U/L |
| ALT | 25-55 | U/L |
| ALP | 39-216 | U/L |
| Total bilirubin | 0.0-0.2 | mg/dl |
| BUN | 5-29 | mg/dl |
| SCr | 0.20-0.80 | mg/dl |
| Total protein | 5.6-7.1 | mg/dl |
| Albumin | 2.70-5.10 | mg/dl |
| Globulin | 1.8-3.0 | mg/dl |
| Sodium | 143-156 | mEq/L |
| Potassium | 5.40-7 | mEq/L |
| Calcium | 7.2-13.9 | mg/dl |
| Chloride | 100-110 | mEq/L |
| Uric acid | 1.20-7.5 | mg/dl |
| Total cholesterol | 40-130 | mg/dl |
| Triglyceride | 26-145 | mg/dl |
| Glucose | 50-135 | mg/dl |
| Hemoglobin | 12-17.5 | g/dl |
| Hematocrit | 42.5-49.4 | % |
| Platelet count | 500-1300 | $\times 10^3$ cells/cumm |
| PMN | 9-34 | % |
| Lymphocyte | 65-85 | % |
| Monocyte | 0-5 | % |

Table 64 (continued) Normal lab values of rats (Chengelis, C.P., 1992; Harkness, J.E. and Wagner, J.E., 1995).

| Parameter | Lab values | Units |
|------------|------------|-------|
| Eosinophol | 0-6 | % |
| Basophil | 0-1.50 | % |
| MCV | 55-65 | fl |
| MCH | 16-22 | pg |
| MCHC | 28-34 | g/dl |



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VITAE

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