

**Study Number:** C20323-03  
**Test Type:** TOX  
**Route:** Oral Gavage  
**Species/Strain:** Rat/Wistar Han

**PA41: Clinical Chemistry Summary**  
**Test Compound:** Resveratrol  
**CAS Number:** 501-36-0

**Date Report Requested:** 06/05/2019  
**Time Report Requested:** 13:24:04  
**Lab:** NTP

**C Number:**

C20323-03

**Study Gender:**

Both

**PWG Approval Date**

See web page for date of PWG Approval

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**F1 Male**

	Phase Day	Treatment Groups (mg/kg)				
		0	78	156	312.5	625
Urea Nitrogen (mg/dL)	SD 95	15.0 ± 0.3 (5)	15.7 ± 0.5 (5)	13.5 ± 0.6 (5)	14.3 ± 0.7 (5)	14.2 ± 0.5 (5)
Percent of Control			104.7	90.0	95.3	94.7
Creatinine (mg/dL)	SD 95	0.70 ± 0.02 (5)	0.71 ± 0.01 (5)	0.69 ± 0.01 (5)	0.72 ± 0.01 (5)	0.69 ± 0.01 (5)
Percent of Control			101.4	98.6	102.9	98.6
Glucose (mg/dL)	SD 95	128.7 ± 5.4 (5)	119.5 ± 2.7 (5)	122.5 ± 2.6 (5)	130.4 ± 14.5 (5)	116.7 ± 1.6 (5)
Percent of Control			92.9	95.2	101.3	90.7
Total Protein (g/dL)	SD 95	6.66 ± 0.09 (5)	6.68 ± 0.07 (5)	6.64 ± 0.13 (5)	6.71 ± 0.10 (5)	6.68 ± 0.09 (5)
Percent of Control			100.3	99.7	100.8	100.3
Globulin (g/dL)	SD 95	2.31 ± 0.06 (5)	2.33 ± 0.05 (5)	2.30 ± 0.08 (5)	2.38 ± 0.03 (5)	2.24 ± 0.07 (5)
Percent of Control			100.9	99.6	103.0	97.0
A/G Ratio	SD 95	1.90 ± 0.05 (5)	1.88 ± 0.04 (5)	1.90 ± 0.05 (5)	1.83 ± 0.05 (5)	2.00 ± 0.07 (5)
Percent of Control			99.3	100.2	96.5	105.4
Albumin (g/dL)	SD 95	4.35 ± 0.04 (5)	4.35 ± 0.04 (5)	4.34 ± 0.06 (5)	4.33 ± 0.10 (5)	4.44 ± 0.04 (5)
Percent of Control			100.0	99.8	99.5	102.1
Cholesterol (mg/dL)	SD 95	86.7 ± 4.3 (5)	91.7 ± 5.0 (5)	85.0 ± 5.4 (5)	96.7 ± 8.6 (5)	84.8 ± 7.1 (5)
Percent of Control			105.8	98.0	111.5	97.8
Triglyceride (mg/dL)	SD 95	176.0 ± 21.7 (5)	196.8 ± 25.7 (5)	213.2 ± 31.9 (5)	192.8 ± 18.4 (5)	196.9 ± 34.0 (5)
Percent of Control			111.8	121.1	109.5	111.9
Alanine Aminotransferase (IU/L)	SD 95	33.8 ± 2.2 (5)	32.3 ± 1.0 (5)	32.0 ± 1.8 (5)	32.6 ± 1.7 (5)	34.0 ± 2.1 (5)
Percent of Control			95.6	94.7	96.4	100.6
Alkaline Phosphatase (IU/L)	SD 95	120.6 ± 11.0 (5)	155.9 ± 10.0 (5)	134.5 ± 12.4 (5)	140.1 ± 12.1 (5)	141.1 ± 6.0 (5)
Percent of Control			129.3	111.5	116.2	117.0

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**F1 Male**

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	Phase Day	Treatment Groups (mg/kg)				
		0	78	156	312.5	625
Creatine Kinase (IU/L)	SD 95	323.4 ± 62.9 (5)	167.9 ± 50.0 (5)	270.6 ± 36.5 (5)	226.9 ± 39.4 (5)	249.3 ± 107.7 (5)
Percent of Control			51.9	83.7	70.2	77.1
Sorbitol Dehydrogenase (IU/L)	SD 95	14.8 ± 1.0 (5)	10.5 ± 0.9 (5)	13.0 ± 0.6 (5)	11.7 ± 0.7 (5)	11.7 ± 1.1 (5)
Percent of Control			70.9	87.8	79.1	79.1
Bile salt/acids (µmol/L)	SD 95	13.8 ± 3.4 (5)	10.0 ± 2.2 (5)	8.8 ± 2.8 (5)	13.3 ± 4.5 (5)	13.7 ± 4.4 (5)
Percent of Control			72.5	63.8	96.4	99.3

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**F1 Male**

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		<b>Treatment Groups</b>
	<b>Phase Day</b>	<b>1250</b>
Urea Nitrogen (mg/dL)	SD 95	15.2 ± 0.6 (5)
Percent of Control		101.3
Creatinine (mg/dL)	SD 95	0.69 ± 0.02 (5)
Percent of Control		98.6
Glucose (mg/dL)	SD 95	117.5 ± 2.5 (5)
Percent of Control		91.3
Total Protein (g/dL)	SD 95	6.73 ± 0.04 (5)
Percent of Control		101.1
Globulin (g/dL)	SD 95	2.27 ± 0.04 (5)
Percent of Control		98.3
A/G Ratio	SD 95	1.97 ± 0.06 (5)
Percent of Control		104.0
Albumin (g/dL)	SD 95	4.46 ± 0.05 (5)
Percent of Control		102.5
Cholesterol (mg/dL)	SD 95	87.3 ± 6.5 (5)
Percent of Control		100.7
Triglyceride (mg/dL)	SD 95	225.4 ± 19.9 (5)
Percent of Control		128.1
Alanine Aminotransferase (IU/L)	SD 95	36.1 ± 2.1 (5)
Percent of Control		106.8
Alkaline Phosphatase (IU/L)	SD 95	148.0 ± 9.1 (5)
Percent of Control		122.7

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**F1 Male**

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	<b>Phase Day</b>	<b>Treatment Groups</b>
		<b>1250</b>
Creatine Kinase (IU/L)	SD 95	288.0 ± 86.4 (5)
Percent of Control		89.1
Sorbitol Dehydrogenase (IU/L)	SD 95	12.7 ± 0.8 (5)
Percent of Control		85.8
Bile salt/acids (µmol/L)	SD 95	33.2 ± 6.1 (5)
Percent of Control		240.6

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**F1 Female**

	Phase Day	Treatment Groups (mg/kg)				
		0	78	156	312.5	625
Urea Nitrogen (mg/dL)	SD 95	18.0 ± 1.5 (5)	16.3 ± 1.2 (5)	17.1 ± 2.2 (5)	14.7 ± 0.9 (5)	14.8 ± 0.4 (5)
Percent of Control			90.6	95.0	81.7	82.2
Creatinine (mg/dL)	SD 95	0.73 ± 0.01 (5)	0.76 ± 0.01 (5)	0.72 ± 0.01 (5)	0.73 ± 0.03 (5)	0.72 ± 0.01 (5)
Percent of Control			104.1	98.6	100.0	98.6
Glucose (mg/dL)	SD 95	132.6 ± 9.2 (5)	116.1 ± 2.7 (5)	119.7 ± 1.7 (5)	109.0 ± 4.8 (5)	110.3 ± 3.6 (5)
Percent of Control			87.6	90.3	82.2	83.2
Total Protein (g/dL)	SD 95	7.23 ± 0.09 (5)	6.98 ± 0.21 (5)	7.04 ± 0.13 (5)	7.09 ± 0.12 (5)	7.15 ± 0.26 (5)
Percent of Control			96.5	97.4	98.1	98.9
Globulin (g/dL)	SD 95	2.14 ± 0.06 (5)	2.10 ± 0.10 (5)	2.01 ± 0.04 (5)	2.01 ± 0.08 (5)	2.10 ± 0.14 (5)
Percent of Control			98.1	93.9	93.9	98.1
A/G Ratio	SD 95	2.39 ± 0.06 (5)	2.35 ± 0.09 (5)	2.51 ± 0.05 (5)	2.56 ± 0.10 (5)	2.43 ± 0.10 (5)
Percent of Control			98.5	105.2	107.2	101.9
Albumin (g/dL)	SD 95	5.09 ± 0.04 (5)	4.88 ± 0.14 (5)	5.03 ± 0.10 (5)	5.08 ± 0.08 (5)	5.05 ± 0.14 (5)
Percent of Control			95.9	98.8	99.8	99.2
Cholesterol (mg/dL)	SD 95	68.2 ± 8.7 (5)	62.8 ± 5.9 (5)	64.1 ± 4.6 (5)	69.1 ± 3.5 (5)	64.5 ± 4.7 (5)
Percent of Control			92.1	94.0	101.3	94.6
Triglyceride (mg/dL)	SD 95	144.2 ± 15.7 (5)	111.5 ± 20.3 (5)	119.4 ± 11.5 (5)	114.1 ± 12.3 (5)	112.3 ± 18.5 (5)
Percent of Control			77.3	82.8	79.1	77.9
Alanine Aminotransferase (IU/L)	SD 95	29.1 ± 3.0 (5)	27.9 ± 1.0 (5)	31.2 ± 1.9 (5)	27.2 ± 1.5 (5)	30.9 ± 2.6 (5)
Percent of Control			95.9	107.2	93.5	106.2
Alkaline Phosphatase (IU/L)	SD 95	63.8 ± 5.4 (5)	111.8 ± 10.7 (5) *	88.2 ± 10.8 (5)	98.4 ± 13.5 (5)	87.8 ± 11.6 (5)
Percent of Control			175.2	138.2	154.2	137.6

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**F1 Female**

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	Phase Day	Treatment Groups (mg/kg)				
		0	78	156	312.5	625
Creatine Kinase (IU/L)	SD 95	158.5 ± 9.4 (5)	367.1 ± 104.0 (5)	229.8 ± 37.3 (5)	163.2 ± 27.0 (5)	248.0 ± 61.9 (5)
Percent of Control			231.6	145.0	103.0	156.5
Sorbitol Dehydrogenase (IU/L)	SD 95	10.9 ± 0.9 (5)	8.9 ± 0.5 (5)	8.8 ± 0.8 (5)	10.2 ± 1.0 (5)	10.8 ± 0.8 (5)
Percent of Control			81.7	80.7	93.6	99.1
Bile salt/acids (µmol/L)	SD 95	11.1 ± 2.0 (5) *	15.3 ± 3.6 (5)	13.5 ± 2.6 (5)	14.2 ± 3.8 (5)	16.0 ± 6.9 (5)
Percent of Control			137.8	121.6	127.9	144.1

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F1 Female

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		<b>Treatment Groups</b>
	<b>Phase Day</b>	<b>1250</b>
Urea Nitrogen (mg/dL)	SD 95	16.0 ± 0.8 (5)
Percent of Control		88.9
Creatinine (mg/dL)	SD 95	0.72 ± 0.01 (5)
Percent of Control		98.6
Glucose (mg/dL)	SD 95	115.7 ± 4.9 (5)
Percent of Control		87.3
Total Protein (g/dL)	SD 95	7.23 ± 0.12 (5)
Percent of Control		100.0
Globulin (g/dL)	SD 95	2.14 ± 0.13 (5)
Percent of Control		100.0
A/G Ratio	SD 95	2.42 ± 0.16 (5)
Percent of Control		101.5
Albumin (g/dL)	SD 95	5.09 ± 0.06 (5)
Percent of Control		100.0
Cholesterol (mg/dL)	SD 95	79.4 ± 5.0 (5)
Percent of Control		116.4
Triglyceride (mg/dL)	SD 95	146.6 ± 25.8 (5)
Percent of Control		101.7
Alanine Aminotransferase (IU/L)	SD 95	31.3 ± 2.4 (5)
Percent of Control		107.6
Alkaline Phosphatase (IU/L)	SD 95	93.2 ± 6.7 (5)
Percent of Control		146.1



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**F1 Female**

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	<b>Phase Day</b>	<b>Treatment Groups</b>
		<b>1250</b>
Creatine Kinase (IU/L)	SD 95	135.2 ± 15.2 (5)
Percent of Control		85.3
Sorbitol Dehydrogenase (IU/L)	SD 95	9.7 ± 0.8 (5)
Percent of Control		89.0
Bile salt/acids (µmol/L)	SD 95	40.5 ± 9.8 (5)
Percent of Control		364.9

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#### LEGEND

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Values given as mean  $\pm$  SEM (N) of the litter means with Percent of Control calculated by (dosed group mean / control group mean) x 100

SD – Study Day

Statistical analysis performed using a bootstrapped Jonckheere test for trend and a Datta-Satten modified Wilcoxon test with Hommel adjustment for pairwise comparisons.

Statistical significance for the control group indicates a significant trend test

Statistical significance for a treatment group indicates a significant pairwise test compared to the vehicle control group

\* Statistically significant at  $P \leq 0.05$

\*\* Statistically significant at  $P \leq 0.01$

**\*\* END OF REPORT \*\***