

Experiment Number: C20605-01

Test Type: TOX

Route: Oral Gavage

Species/Strain: Rat/Harlan Sprague Dawley

C Number:

C20605-01

Cage Range:

All

Date Range:

All

Reasons For Removal:

All

Removal Date Range:

All

Treatment Groups:

All

Study Gender:

Both

PA43: Hematology Summary

Test Compound: Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/16/2017

Time Report Requested: 12:55:22

Lab: NTP

Experiment Number: C20605-01

Test Type: TOX

Route: Oral Gavage

Species/Strain: Rat/Harlan Sprague Dawley

PA43: Hematology Summary

Test Compound: Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/16/2017

Time Report Requested: 12:55:22

Lab: NTP

Male: Day 28 Males

	Phase Day	Treatment Groups (mg/kg)			
		0	62.5	125	250
Hematocrit (%)	SD 28	43.7 ± 0.3 (9)	44.3 ± 0.6 (10)	42.5 ± 0.4 (10)	45.0 ± 0.7 (10)
Percent of Control			101.5	97.3	103.0
Manual Hematocrit (%)	SD 28	44.1 ± 0.5 (9) *	44.3 ± 0.4 (10)	43.8 ± 0.5 (10)	45.2 ± 0.6 (10)
Percent of Control			100.4	99.3	102.5
Hemoglobin (g/dL)	SD 28	14.1 ± 0.1 (9)	14.2 ± 0.2 (10)	13.7 ± 0.1 (10)	14.4 ± 0.2 (10)
Percent of Control			100.6	97.1	101.5
Erythrocytes (10 ⁶ /uL)	SD 28	7.53 ± 0.07 (9)	7.54 ± 0.10 (10)	7.30 ± 0.06 (10)	7.61 ± 0.12 (10)
Percent of Control			100.16	96.96	101.12
Reticulocytes (10 ³ /uL)	SD 28	217.4 ± 12.0 (9)	243.5 ± 8.1 (10)	197.9 ± 6.0 (10)	223.0 ± 10.0 (10)
Percent of Control			112.0	91.0	102.6
Mean Cell Volume (fL)	SD 28	58.1 ± 0.6 (9)	58.8 ± 0.4 (10)	58.2 ± 0.4 (10)	59.1 ± 0.2 (10)
Percent of Control			101.2	100.2	101.7
Mean Cell Hemoglobin (pg)	SD 28	18.8 ± 0.2 (9)	18.9 ± 0.2 (10)	18.8 ± 0.2 (10)	18.9 ± 0.2 (10)
Percent of Control			100.4	100.2	100.5
Mean Cell Hemoglobin Concentration (g/dL)	SD 28	32.4 ± 0.1 (9)	32.1 ± 0.3 (10)	32.4 ± 0.2 (10)	32.0 ± 0.3 (10)
Percent of Control			99.3	100.0	98.7
Platelets (10 ³ /uL)	SD 28	871.0 ± 63 (9)	863.0 ± 72 (10)	891.0 ± 47 (10)	872.0 ± 55 (10)
Percent of Control			99.0	102.0	100.0
White Blood Cells (10 ³ /uL)	SD 28	10.30 ± 0.70 (9)	10.01 ± 0.60 (10)	9.27 ± 0.93 (10)	9.97 ± 0.89 (10)
Percent of Control			97.19	90.00	96.75
Neutrophils (10 ³ /uL)	SD 28	0.97 ± 0.11 (9)	1.07 ± 0.09 (10)	0.99 ± 0.14 (10)	1.10 ± 0.12 (10)
Percent of Control			111.00	102.72	114.00

Experiment Number: C20605-01

Test Type: TOX

Route: Oral Gavage

Species/Strain: Rat/Harlan Sprague Dawley

PA43: Hematology Summary

Test Compound: Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/16/2017

Time Report Requested: 12:55:22

Lab: NTP

Male: Day 28 Males

	Phase Day	Treatment Groups (mg/kg)			
		0	62.5	125	250
Lymphocytes (10 ³ /uL)	SD 28	8.91 ± 0.63 (9)	8.52 ± 0.48 (10)	7.87 ± 0.74 (10)	8.38 ± 0.74 (10)
Percent of Control			95.59	88.35	94.01
Total Lymphocytes (10 ³ /uL)	SD 28	8.98 ± 0.63 (9)	8.58 ± 0.49 (10)	7.93 ± 0.74 (10)	8.44 ± 0.75 (10)
Percent of Control			95.60	88.28	94.03
Monocytes (10 ³ /uL)	SD 28	0.24 ± 0.04 (9)	0.24 ± 0.04 (10)	0.25 ± 0.04 (10)	0.31 ± 0.05 (10)
Percent of Control			102.14	104.65	128.93
Basophils (10 ³ /uL)	SD 28	0.02 ± 0.01 (9)	0.02 ± 0.01 (10)	0.02 ± 0.01 (10)	0.03 ± 0.01 (10)
Percent of Control			105.00	100.00	135.00
Eosinophils (10 ³ /uL)	SD 28	0.10 ± 0.02 (9) *	0.09 ± 0.02 (10)	0.08 ± 0.02 (10)	0.09 ± 0.03 (10)
Percent of Control			95.11	84.89	90.00
Large Unstained Cells (10 ³ /uL)	SD 28	0.07 ± 0.02 (9)	0.07 ± 0.02 (10)	0.05 ± 0.01 (10)	0.07 ± 0.01 (10)
Percent of Control			97.50	79.50	97.50

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Lab: NTP

Male: Day 28 Males

	Phase Day	Treatment Groups (mg/kg)	
		500	1000
Hematocrit (%)	SD 28	43.0 ± 0.3 (10)	44.7 ± 0.6 (10)
Percent of Control		98.5	102.4
Manual Hematocrit (%)	SD 28	44.4 ± 0.3 (10)	45.8 ± 0.5 (9)
Percent of Control		100.7	103.8
Hemoglobin (g/dL)	SD 28	14.0 ± 0.1 (10)	14.3 ± 0.2 (10)
Percent of Control		99.0	101.4
Erythrocytes (10 ⁶ /uL)	SD 28	7.44 ± 0.09 (10)	7.56 ± 0.12 (10)
Percent of Control		98.81	100.40
Reticulocytes (10 ³ /uL)	SD 28	212.1 ± 8.1 (10)	224.9 ± 10.0 (10)
Percent of Control		97.6	103.5
Mean Cell Volume (fL)	SD 28	57.9 ± 0.5 (10)	59.2 ± 0.7 (10)
Percent of Control		99.7	102.0
Mean Cell Hemoglobin (pg)	SD 28	18.9 ± 0.2 (10)	19.0 ± 0.2 (10)
Percent of Control		100.2	100.8
Mean Cell Hemoglobin Concentration (g/dL)	SD 28	32.6 ± 0.2 (10)	32.1 ± 0.2 (10)
Percent of Control		100.6	99.0
Platelets (10 ³ /uL)	SD 28	881.0 ± 71 (10)	953.0 ± 55 (10)
Percent of Control		101.0	110.0
White Blood Cells (10 ³ /uL)	SD 28	9.46 ± 0.86 (10)	10.06 ± 0.87 (10)
Percent of Control		91.86	97.66
Neutrophils (10 ³ /uL)	SD 28	0.95 ± 0.15 (10)	1.05 ± 0.09 (10)
Percent of Control		98.59	108.10

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Species/Strain: Rat/Harlan Sprague Dawley

PA43: Hematology Summary

Test Compound: Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/16/2017

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Lab: NTP

Male: Day 28 Males

	Phase Day	Treatment Groups (mg/kg)	
		500	1000
Lymphocytes (10 ³ /uL)	SD 28	8.17 ± 0.69 (10)	8.54 ± 0.76 (10)
Percent of Control		91.66	95.80
Total Lymphocytes (10 ³ /uL)	SD 28	8.22 ± 0.70 (10)	8.61 ± 0.77 (10)
Percent of Control		91.57	95.95
Monocytes (10 ³ /uL)	SD 28	0.20 ± 0.06 (10)	0.29 ± 0.06 (10)
Percent of Control		83.72	120.14
Basophils (10 ³ /uL)	SD 28	0.02 ± 0.01 (10)	0.03 ± 0.01 (10)
Percent of Control		90.00	145.00
Eosinophils (10 ³ /uL)	SD 28	0.07 ± 0.02 (10)	0.09 ± 0.03 (10)
Percent of Control		71.59	87.95
Large Unstained Cells (10 ³ /uL)	SD 28	0.05 ± 0.02 (10)	0.08 ± 0.02 (10)
Percent of Control		79.50	115.50

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PA43: Hematology Summary

Test Compound: Gum Guggul Extract

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Date Report Requested: 05/16/2017

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Lab: NTP

Male: Day 92 Males

	Phase Day	Treatment Groups (mg/kg)			
		0	62.5	125	250
Hematocrit (%)	SD 92	47.7 ± 0.5 (10)	45.3 ± 0.6 (10) *	45.8 ± 0.7 (10)	46.5 ± 0.6 (10)
Percent of Control			94.9	96.1	97.5
Manual Hematocrit (%)	SD 92	46.9 ± 0.3 (10)	43.9 ± 0.5 (10) **	45.0 ± 0.6 (10)	45.8 ± 0.6 (10)
Percent of Control			93.6	95.9	97.7
Hemoglobin (g/dL)	SD 92	15.0 ± 0.1 (10)	14.4 ± 0.1 (10)	14.6 ± 0.2 (10)	14.7 ± 0.2 (10)
Percent of Control			96.5	97.3	98.1
Erythrocytes (10 ⁶ /uL)	SD 92	8.49 ± 0.10 (10)	8.18 ± 0.12 (10)	8.39 ± 0.12 (10)	8.23 ± 0.10 (10)
Percent of Control			96.40	98.87	96.98
Reticulocytes (10 ³ /uL)	SD 92	187.0 ± 8.0 (10)	174.2 ± 5.4 (10)	174.6 ± 6.3 (10)	188.0 ± 6.2 (10)
Percent of Control			93.2	93.4	100.5
Mean Cell Volume (fL)	SD 92	56.2 ± 0.4 (10)	55.4 ± 0.3 (10)	54.6 ± 0.3 (10) *	56.5 ± 0.5 (10)
Percent of Control			98.6	97.2	100.6
Mean Cell Hemoglobin (pg)	SD 92	17.7 ± 0.2 (10)	17.7 ± 0.1 (10)	17.3 ± 0.1 (10)	17.8 ± 0.1 (10)
Percent of Control			100.1	98.1	101.0
Mean Cell Hemoglobin Concentration (g/dL)	SD 92	31.4 ± 0.2 (10)	31.9 ± 0.2 (10)	31.8 ± 0.2 (10)	31.6 ± 0.2 (10)
Percent of Control			101.6	101.2	100.5
Platelets (10 ³ /uL)	SD 92	899.0 ± 26 (10)	860.0 ± 18 (10)	902.0 ± 24 (10)	837.0 ± 28 (10)
Percent of Control			96.0	100.0	93.0
White Blood Cells (10 ³ /uL)	SD 92	10.85 ± 0.44 (10)	9.14 ± 0.42 (10)	8.99 ± 0.40 (10) *	10.21 ± 0.58 (10)
Percent of Control			84.21	82.85	94.12
Neutrophils (10 ³ /uL)	SD 92	1.14 ± 0.08 (10)	0.95 ± 0.04 (10)	1.13 ± 0.08 (10)	1.12 ± 0.08 (10)
Percent of Control			83.39	99.21	98.07

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PA43: Hematology Summary

Test Compound: Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/16/2017

Time Report Requested: 12:55:22

Lab: NTP

Male: Day 92 Males

	Phase Day	Treatment Groups (mg/kg)			
		0	62.5	125	250
Lymphocytes (10 ³ /uL)	SD 92	9.21 ± 0.44 (10)	7.79 ± 0.39 (10)	7.50 ± 0.34 (10) *	8.69 ± 0.51 (10)
Percent of Control			84.57	81.38	94.31
Total Lymphocytes (10 ³ /uL)	SD 92	9.30 ± 0.44 (10)	7.84 ± 0.39 (10)	7.55 ± 0.34 (10) *	8.74 ± 0.51 (10)
Percent of Control			84.21	81.09	93.93
Monocytes (10 ³ /uL)	SD 92	0.23 ± 0.03 (10)	0.21 ± 0.02 (10)	0.18 ± 0.03 (10)	0.21 ± 0.03 (10)
Percent of Control			93.39	81.06	91.63
Basophils (10 ³ /uL)	SD 92	0.04 ± 0.00 (10)	0.02 ± 0.00 (10) **	0.02 ± 0.00 (10) *	0.03 ± 0.00 (10)
Percent of Control			58.33	63.89	69.44
Eosinophils (10 ³ /uL)	SD 92	0.15 ± 0.02 (10)	0.12 ± 0.01 (10)	0.11 ± 0.02 (10)	0.13 ± 0.01 (10)
Percent of Control			81.76	75.00	84.46
Large Unstained Cells (10 ³ /uL)	SD 92	0.09 ± 0.03 (10)	0.04 ± 0.00 (10) *	0.05 ± 0.01 (10)	0.05 ± 0.00 (10)
Percent of Control			47.83	52.17	55.43

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Lab: NTP

Male: Day 92 Males

	Phase Day	Treatment Groups (mg/kg)	
		500	1000
Hematocrit (%)	SD 92	47.5 ± 0.4 (10)	44.8 ± 0.7 (10) *
Percent of Control		99.6	94.0
Manual Hematocrit (%)	SD 92	46.7 ± 0.5 (10)	44.0 ± 0.9 (10) *
Percent of Control		99.6	93.8
Hemoglobin (g/dL)	SD 92	14.9 ± 0.1 (10)	14.2 ± 0.2 (10) **
Percent of Control		99.8	95.0
Erythrocytes (10 ⁶ /uL)	SD 92	8.46 ± 0.11 (10)	8.07 ± 0.13 (10)
Percent of Control		99.69	95.08
Reticulocytes (10 ³ /uL)	SD 92	173.1 ± 7.2 (10)	180.2 ± 13.6 (10)
Percent of Control		92.5	96.4
Mean Cell Volume (fL)	SD 92	56.1 ± 0.3 (10)	55.6 ± 0.5 (10)
Percent of Control		99.9	98.9
Mean Cell Hemoglobin (pg)	SD 92	17.7 ± 0.2 (10)	17.6 ± 0.2 (10)
Percent of Control		100.3	99.8
Mean Cell Hemoglobin Concentration (g/dL)	SD 92	31.5 ± 0.2 (10)	31.7 ± 0.2 (10)
Percent of Control		100.3	101.0
Platelets (10 ³ /uL)	SD 92	877.0 ± 32 (10)	976.0 ± 44 (10)
Percent of Control		98.0	109.0
White Blood Cells (10 ³ /uL)	SD 92	9.46 ± 0.58 (10)	9.38 ± 0.55 (10)
Percent of Control		87.16	86.46
Neutrophils (10 ³ /uL)	SD 92	1.14 ± 0.08 (10)	1.45 ± 0.19 (10)
Percent of Control		99.74	127.15

Experiment Number: C20605-01

Test Type: TOX

Route: Oral Gavage

Species/Strain: Rat/Harlan Sprague Dawley

PA43: Hematology Summary

Test Compound: Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/16/2017

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Lab: NTP

Male: Day 92 Males

	Phase Day	Treatment Groups (mg/kg)	
		500	1000
Lymphocytes (10 ³ /uL)	SD 92	7.92 ± 0.48 (10)	7.51 ± 0.40 (10)
Percent of Control		85.99	81.55
Total Lymphocytes (10 ³ /uL)	SD 92	7.97 ± 0.49 (10)	7.56 ± 0.40 (10)
Percent of Control		85.71	81.22
Monocytes (10 ³ /uL)	SD 92	0.22 ± 0.04 (10)	0.24 ± 0.03 (10)
Percent of Control		97.36	106.17
Basophils (10 ³ /uL)	SD 92	0.02 ± 0.00 (10) **	0.03 ± 0.01 (10)
Percent of Control		55.56	77.78
Eosinophils (10 ³ /uL)	SD 92	0.11 ± 0.01 (10)	0.11 ± 0.02 (10)
Percent of Control		75.68	77.03
Large Unstained Cells (10 ³ /uL)	SD 92	0.05 ± 0.01 (10)	0.05 ± 0.01 (10)
Percent of Control		57.61	48.91

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Lab: NTP

Female: Day 28 Females

	Phase Day	Treatment Groups (mg/kg)			
		0	62.5	125	250
Hematocrit (%)	SD 28	39.6 ± 0.6 (10)	39.5 ± 0.8 (10)	38.8 ± 0.7 (10)	39.0 ± 0.6 (10)
Percent of Control			99.8	98.2	98.5
Manual Hematocrit (%)	SD 28	40.6 ± 0.6 (10)	40.0 ± 0.7 (10)	39.2 ± 0.6 (10)	39.7 ± 0.5 (10)
Percent of Control			98.5	96.6	97.8
Hemoglobin (g/dL)	SD 28	13.3 ± 0.2 (10)	13.2 ± 0.2 (10)	12.8 ± 0.2 (10)	13.0 ± 0.2 (10)
Percent of Control			99.9	96.8	97.8
Erythrocytes (10 ⁶ /uL)	SD 28	6.87 ± 0.09 (10)	6.94 ± 0.10 (10)	6.80 ± 0.11 (10)	6.84 ± 0.07 (10)
Percent of Control			101.05	99.00	99.62
Reticulocytes (10 ³ /uL)	SD 28	189.0 ± 13.4 (10)	195.1 ± 16.2 (10)	188.6 ± 8.1 (10)	196.3 ± 13.4 (10)
Percent of Control			103.2	99.8	103.8
Mean Cell Volume (fL)	SD 28	57.6 ± 0.5 (10)	56.9 ± 0.6 (10)	57.2 ± 0.6 (10)	57.0 ± 0.6 (10)
Percent of Control			98.8	99.2	98.9
Mean Cell Hemoglobin (pg)	SD 28	19.3 ± 0.2 (10)	19.1 ± 0.2 (10)	18.9 ± 0.2 (10)	19.0 ± 0.2 (10)
Percent of Control			98.9	97.8	98.1
Mean Cell Hemoglobin Concentration (g/dL)	SD 28	33.5 ± 0.1 (10)	33.6 ± 0.2 (10)	33.1 ± 0.2 (10)	33.3 ± 0.3 (10)
Percent of Control			100.1	98.6	99.2
Platelets (10 ³ /uL)	SD 28	1013.0 ± 56 (10) **	1042.0 ± 36 (10)	1040.0 ± 44 (10)	1020.0 ± 61 (10)
Percent of Control			103.0	103.0	101.0
White Blood Cells (10 ³ /uL)	SD 28	8.57 ± 0.71 (10) *	6.80 ± 0.59 (10)	7.13 ± 0.38 (10)	6.27 ± 0.44 (10)
Percent of Control			79.29	83.10	73.10
Neutrophils (10 ³ /uL)	SD 28	0.71 ± 0.09 (10)	0.59 ± 0.07 (10)	0.72 ± 0.11 (10)	0.74 ± 0.08 (10)
Percent of Control			83.66	101.83	103.52

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PA43: Hematology Summary

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Date Report Requested: 05/16/2017

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Lab: NTP

Female: Day 28 Females

	Phase Day	Treatment Groups (mg/kg)			
		0	62.5	125	250
Lymphocytes (10 ³ /uL)	SD 28	7.51 ± 0.66 (10) *	5.89 ± 0.49 (10)	6.11 ± 0.31 (10)	5.28 ± 0.41 (10)
Percent of Control			78.37	81.27	70.28
Total Lymphocytes (10 ³ /uL)	SD 28	7.56 ± 0.67 (10) **	5.93 ± 0.49 (10)	6.14 ± 0.31 (10)	5.31 ± 0.42 (10) **
Percent of Control			78.41	81.22	70.18
Monocytes (10 ³ /uL)	SD 28	0.20 ± 0.04 (10)	0.17 ± 0.03 (10)	0.18 ± 0.02 (10)	0.14 ± 0.03 (10)
Percent of Control			84.50	88.50	67.50
Basophils (10 ³ /uL)	SD 28	0.02 ± 0.00 (10)	0.02 ± 0.00 (10)	0.02 ± 0.00 (10)	0.01 ± 0.00 (10)
Percent of Control			83.33	83.33	55.56
Eosinophils (10 ³ /uL)	SD 28	0.09 ± 0.01 (10) *	0.09 ± 0.01 (10)	0.07 ± 0.01 (10)	0.08 ± 0.02 (10)
Percent of Control			101.14	77.27	89.77
Large Unstained Cells (10 ³ /uL)	SD 28	0.05 ± 0.01 (10)	0.04 ± 0.01 (10)	0.04 ± 0.01 (10)	0.03 ± 0.01 (10)
Percent of Control			84.00	74.00	56.00

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Lab: NTP

Female: Day 28 Females

	Phase Day	Treatment Groups (mg/kg)	
		500	1000
Hematocrit (%)	SD 28	38.4 ± 0.4 (10)	39.7 ± 0.3 (10)
Percent of Control		97.1	100.3
Manual Hematocrit (%)	SD 28	38.9 ± 0.4 (10)	40.2 ± 0.4 (10)
Percent of Control		95.8	99.0
Hemoglobin (g/dL)	SD 28	12.9 ± 0.1 (10)	13.1 ± 0.1 (10)
Percent of Control		97.2	99.2
Erythrocytes (10 ⁶ /uL)	SD 28	6.75 ± 0.10 (10)	6.90 ± 0.06 (10)
Percent of Control		98.30	100.39
Reticulocytes (10 ³ /uL)	SD 28	170.7 ± 10.3 (10)	177.3 ± 11.0 (10)
Percent of Control		90.3	93.8
Mean Cell Volume (fL)	SD 28	57.0 ± 0.6 (10)	57.6 ± 0.4 (10)
Percent of Control		98.9	100.0
Mean Cell Hemoglobin (pg)	SD 28	19.1 ± 0.2 (10)	19.1 ± 0.1 (10)
Percent of Control		98.9	98.8
Mean Cell Hemoglobin Concentration (g/dL)	SD 28	33.6 ± 0.2 (10)	33.1 ± 0.1 (10)
Percent of Control		100.0	98.7
Platelets (10 ³ /uL)	SD 28	1187.0 ± 57 (10)	1220.0 ± 47 (10) *
Percent of Control		117.0	120.0
White Blood Cells (10 ³ /uL)	SD 28	6.10 ± 0.90 (10) *	7.00 ± 0.91 (10)
Percent of Control		71.16	81.65
Neutrophils (10 ³ /uL)	SD 28	0.49 ± 0.07 (10)	0.60 ± 0.09 (10)
Percent of Control		68.73	84.79

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PA43: Hematology Summary

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Lab: NTP

Female: Day 28 Females

	Phase Day	Treatment Groups (mg/kg)	
		500	1000
Lymphocytes (10 ³ /uL)	SD 28	5.39 ± 0.85 (10) *	6.08 ± 0.79 (10)
Percent of Control		71.80	80.90
Total Lymphocytes (10 ³ /uL)	SD 28	5.42 ± 0.85 (10) **	6.13 ± 0.80 (10) *
Percent of Control		71.69	81.05
Monocytes (10 ³ /uL)	SD 28	0.12 ± 0.02 (10)	0.19 ± 0.04 (10)
Percent of Control		58.00	93.00
Basophils (10 ³ /uL)	SD 28	0.01 ± 0.00 (10)	0.02 ± 0.01 (10)
Percent of Control		55.56	105.56
Eosinophils (10 ³ /uL)	SD 28	0.06 ± 0.01 (10)	0.07 ± 0.01 (10)
Percent of Control		70.45	76.14
Large Unstained Cells (10 ³ /uL)	SD 28	0.03 ± 0.01 (10)	0.05 ± 0.01 (10)
Percent of Control		56.00	104.00

Experiment Number: C20605-01

Test Type: TOX

Route: Oral Gavage

Species/Strain: Rat/Harlan Sprague Dawley

PA43: Hematology Summary

Test Compound: Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/16/2017

Time Report Requested: 12:55:22

Lab: NTP

Female: Day 92 Females

	Phase Day	Treatment Groups (mg/kg)			
		0	62.5	125	250
Hematocrit (%)	SD 92	41.0 ± 0.4 (9)	41.7 ± 0.5 (10)	42.0 ± 0.5 (9)	42.1 ± 0.4 (10)
Percent of Control			101.7	102.4	102.6
Manual Hematocrit (%)	SD 92	40.1 ± 0.4 (9)	39.8 ± 0.6 (10)	40.6 ± 0.6 (9)	40.3 ± 0.7 (10)
Percent of Control			99.2	101.1	100.5
Hemoglobin (g/dL)	SD 92	13.4 ± 0.1 (9)	13.5 ± 0.1 (10)	13.7 ± 0.2 (9)	13.6 ± 0.1 (10)
Percent of Control			101.1	102.4	101.8
Erythrocytes (10 ⁶ /uL)	SD 92	7.39 ± 0.07 (9)	7.43 ± 0.07 (10)	7.45 ± 0.09 (9)	7.45 ± 0.07 (10)
Percent of Control			100.54	100.87	100.87
Reticulocytes (10 ³ /uL)	SD 92	163.6 ± 8.9 (9)	169.7 ± 11.3 (10)	183.4 ± 14.6 (9)	199.2 ± 11.6 (10)
Percent of Control			103.7	112.1	121.8
Mean Cell Volume (fL)	SD 92	55.5 ± 0.4 (9)	56.2 ± 0.4 (10)	56.3 ± 0.6 (9)	56.5 ± 0.3 (10)
Percent of Control			101.1	101.5	101.7
Mean Cell Hemoglobin (pg)	SD 92	18.1 ± 0.2 (9)	18.3 ± 0.1 (10)	18.4 ± 0.3 (9)	18.3 ± 0.1 (10)
Percent of Control			100.7	101.3	101.0
Mean Cell Hemoglobin Concentration (g/dL)	SD 92	32.7 ± 0.2 (9)	32.5 ± 0.1 (10)	32.6 ± 0.3 (9)	32.4 ± 0.1 (10)
Percent of Control			99.5	99.8	99.2
Platelets (10 ³ /uL)	SD 92	884.0 ± 59 (9)	915.0 ± 58 (10)	892.0 ± 24 (9)	788.0 ± 59 (10)
Percent of Control			103.0	101.0	89.0
White Blood Cells (10 ³ /uL)	SD 92	8.80 ± 0.69 (9)	9.05 ± 0.57 (10)	8.53 ± 0.60 (9)	9.65 ± 0.55 (10)
Percent of Control			102.85	96.93	109.68
Neutrophils (10 ³ /uL)	SD 92	0.99 ± 0.09 (9)	1.11 ± 0.17 (10)	0.84 ± 0.05 (9)	0.98 ± 0.07 (10)
Percent of Control			111.72	84.62	98.69

Experiment Number: C20605-01

Test Type: TOX

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Species/Strain: Rat/Harlan Sprague Dawley

PA43: Hematology Summary

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Date Report Requested: 05/16/2017

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Lab: NTP

Female: Day 92 Females

	Phase Day	Treatment Groups (mg/kg)			
		0	62.5	125	250
Lymphocytes (10 ³ /uL)	SD 92	7.45 ± 0.59 (9)	7.60 ± 0.47 (10)	7.26 ± 0.55 (9)	8.23 ± 0.49 (10)
Percent of Control			102.13	97.57	110.47
Total Lymphocytes (10 ³ /uL)	SD 92	7.49 ± 0.59 (9)	7.64 ± 0.47 (10)	7.30 ± 0.56 (9)	8.28 ± 0.50 (10)
Percent of Control			101.96	97.39	110.47
Monocytes (10 ³ /uL)	SD 92	0.19 ± 0.03 (9)	0.17 ± 0.03 (10)	0.21 ± 0.04 (9)	0.24 ± 0.03 (10)
Percent of Control			90.53	112.94	128.65
Basophils (10 ³ /uL)	SD 92	0.02 ± 0.00 (9)	0.02 ± 0.00 (10)	0.02 ± 0.00 (9)	0.03 ± 0.00 (10)
Percent of Control			108.00	90.00	135.00
Eosinophils (10 ³ /uL)	SD 92	0.11 ± 0.02 (9)	0.11 ± 0.03 (10)	0.16 ± 0.06 (9)	0.13 ± 0.02 (10)
Percent of Control			105.00	152.08	118.13
Large Unstained Cells (10 ³ /uL)	SD 92	0.05 ± 0.01 (9)	0.04 ± 0.00 (10)	0.03 ± 0.01 (9)	0.05 ± 0.01 (10)
Percent of Control			75.00	69.05	111.43

Experiment Number: C20605-01

Test Type: TOX

Route: Oral Gavage

Species/Strain: Rat/Harlan Sprague Dawley

PA43: Hematology Summary

Test Compound: Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/16/2017

Time Report Requested: 12:55:22

Lab: NTP

Female: Day 92 Females

	Phase Day	Treatment Groups (mg/kg)	
		500	1000
Hematocrit (%)	SD 92	40.3 ± 0.7 (9)	40.3 ± 0.6 (10)
Percent of Control		98.3	98.2
Manual Hematocrit (%)	SD 92	39.2 ± 0.8 (9)	39.3 ± 0.4 (10)
Percent of Control		97.8	98.0
Hemoglobin (g/dL)	SD 92	13.1 ± 0.2 (9)	13.2 ± 0.2 (10)
Percent of Control		97.9	98.6
Erythrocytes (10 ⁶ /uL)	SD 92	7.37 ± 0.21 (9)	7.21 ± 0.10 (10)
Percent of Control		99.74	97.59
Reticulocytes (10 ³ /uL)	SD 92	167.0 ± 10.2 (9)	184.0 ± 9.8 (10)
Percent of Control		102.1	112.5
Mean Cell Volume (fL)	SD 92	54.9 ± 0.7 (9)	55.9 ± 0.4 (10)
Percent of Control		98.8	100.7
Mean Cell Hemoglobin (pg)	SD 92	17.8 ± 0.3 (9)	18.3 ± 0.2 (10)
Percent of Control		98.3	101.0
Mean Cell Hemoglobin Concentration (g/dL)	SD 92	32.5 ± 0.3 (9)	32.8 ± 0.3 (10)
Percent of Control		99.5	100.3
Platelets (10 ³ /uL)	SD 92	929.0 ± 46 (9)	922.0 ± 46 (10)
Percent of Control		105.0	104.0
White Blood Cells (10 ³ /uL)	SD 92	9.83 ± 0.54 (9)	8.62 ± 0.46 (10)
Percent of Control		111.74	97.91
Neutrophils (10 ³ /uL)	SD 92	0.98 ± 0.08 (9)	1.01 ± 0.07 (10)
Percent of Control		98.65	101.72

Experiment Number: C20605-01

Test Type: TOX

Route: Oral Gavage

Species/Strain: Rat/Harlan Sprague Dawley

PA43: Hematology Summary

Test Compound: Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/16/2017

Time Report Requested: 12:55:22

Lab: NTP

Female: Day 92 Females

	Phase Day	Treatment Groups (mg/kg)	
		500	1000
Lymphocytes (10 ³ /uL)	SD 92	8.42 ± 0.44 (9)	7.21 ± 0.42 (10)
Percent of Control		113.10	96.86
Total Lymphocytes (10 ³ /uL)	SD 92	8.48 ± 0.45 (9)	7.26 ± 0.42 (10)
Percent of Control		113.15	96.87
Monocytes (10 ³ /uL)	SD 92	0.24 ± 0.04 (9)	0.22 ± 0.03 (10)
Percent of Control		127.06	115.94
Basophils (10 ³ /uL)	SD 92	0.03 ± 0.00 (9)	0.02 ± 0.00 (10)
Percent of Control		135.00	108.00
Eosinophils (10 ³ /uL)	SD 92	0.11 ± 0.02 (9)	0.11 ± 0.02 (10)
Percent of Control		103.13	102.19
Large Unstained Cells (10 ³ /uL)	SD 92	0.06 ± 0.01 (9)	0.05 ± 0.00 (10)
Percent of Control		121.43	98.57

Experiment Number: C20605-01

Test Type: TOX

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LEGEND

SD – Study Day; GD – Gestation Day; LD – Lactation Day; PND – Postnatal Day, adults post-weaning

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

Hematology for gestation phase includes pregnant females only

Statistical analysis performed by Jonckheere (trend) and Shirley or Dunn (pairwise) tests

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 ****