Hematology Parameters for the Crl:CD®BR Rat

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HEMATOLOGY PARAMETERS FOR THE CrI:CD®BR RAT

Normal or "expected" values for hematology and serum chemistry are frequently sought by those wishing to compare values assayed in their laboratory or obtained in their research with values commonly obtained in other laboratories. Unfortunately, the conditions of the assay procedure as well as the conditions and even the specifications of the animals assayed are seldom the same between laboratories and, in the case of outbred stocks, may even vary over time due to small sampling sizes and genetic drift in populations. Even if these variables are taken into account, meaningful data on these parameters are still often hard to obtain for several reasons. Control group data published in the peer-reviewed literature, which are often used to compile listings of normal values, can be hard to locate. Even though such data are reported in the literature along with test group data, this information is not usually a topic of the paper and, therefore, is commonly not referenced by a keyword. For this reason, the information is often overlooked by computerized literature searches. In addition, published articles only rarely refer to methodology used to obtain the hematological values reported. As the data presented here illustrate, different analytical methods and equipment can result in considerably different values for the same parameter. Moreover, other environmental and technique related variables, such as the method used to restrain the animals for blood collection as well as the anatomic site from which the blood was drawn (e.g., tail vein, orbital sinus, heart puncture, abdominal aorta), can result in different values for some of these parameters (1-8). For these reasons, care should be taken in using these data which cannot substitute for historical data collected within a single institution.

The information presented in this monograph was obtained from toxicology studies designed to support product registration. All studies were performed under Good Laboratory Practice regulations of either the US Food and Drug Administration or the Environmental Protection Agency. All animals were housed one per cage and fed Purina Rodent Chow except for study groups HV and HY. Animals in study group HV were housed 5/cage and fed a diet identified in the report as certified rodent diet #1324; animals in study group HY were housed 5/cage and fed a rodent diet produced by K & K Greef. All groups of rats were either untreated or vehicle controls in these studies. The actual health status of the animals at the time of blood sampling was not indicated in any of the study reports.

The data are separated by sex and presented in tables by individual study group and time on study. Where necessary, results were converted to match those units more commonly used and presented here. Due to the variation in methodology used to obtain these values, and the intrinsic variation among the different studies, it would be inappropriate and misleading to combine individual group means into overall means or medians.

Table 1 presents codes relating to the analytical methods or instrumentation used to obtain the means for each parameter measured in each study group. These codes are identified in Table 2. Information is arranged alphabetically by study code for easier access. In study group A, methodology was changed during the course of a study. Samples from the first three intervals (1, 26 and 52 weeks) were analyzed by the methods listed in the first column in Table 1, and the last two intervals (78 and 104 weeks) were analyzed by the methods in the second column. Table 1 also reports the start date (date of first dosing), the vehicle administered to the control group (if any), and the route of test article, or vehicle, administration for each group of rats. The site of blood draw is not given as it was not available in the final reports from which these data were extracted. To determine the age of the rats, add approximately 6 weeks to the study interval since, in general, dosing started when the rats were about 6 weeks of age.

Tables 3 (males) and 4 (females) present the mean values reported for each parameter by study group. In many cases, a single study group had blood analysis performed at several different intervals, all of which are reported here under the same study identification code. Data in these tables are presented by increasing study interval, and consequently by increasing animal age. Study start dates (date of first dose) are repeated here for your convenience, and the number of animals comprising the means is also reported.

The graphs display the information in the tables, showing the range of the means obtained from all of the different methodologies.

ACKNOWLEDGMENTS:

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DEFINITIONS

HPMC: Hydroxypropylmethylcellulose

RBC: Red Blood Cell Count

WBC: White Blood Cell Count

MCV: Mean Corpuscular Volume

MCH: Mean Corpuscular Hemoglobin

MCHC: Mean Corpuscular Hemoglobin Concentration

PT: Prothrombin Time

AP7T: Activated Partial Thromboplastin Time

TABLE 1

METHODOLOGY

STUDY CODE	A	A	DW	EG	EH	El	EO	EZ	FA	FB	FC
STUDY START DATE	5/27/82	5/28/82	3/8/85	11/12/86	7/27/88	2/6/85	10/8/86	5/15/90	9/29/89	I0/12/89	9/7/89
VEHICLE	NONE	NONE	0.2% HPMC	WATER	NONE	0.2% HPMC	SALINE	MANNITOL CITRATE	0.2% HPMC	NONE	SALINE
ROUTE OF ADMIN.	DIET <78 WEEKS	DIET >52 WEEKS	GAVAGE	GAVAGE	DIET	GAVAGE	SC INJECT.	I V	GAVAGE	DIET	I V
HEMATOLOGY											
HEMOGLOBIN (Hb)	18	4	1	1	6	1	1	6	6	6	6
HEMATOCRIT (HCT)	18	4	1	1	6	1	1	6	6	6	6
RBC	18	4	1	1	6	1	1	6	6	6	6
WBC	18	4	1	1	6	1	1	6	6	6	6
PLATELET	22	4		3	6			6	6	6	6
MCV	18	4	1	1	6	1	1	6	6	6	6
MCH	18	4	1	1	6	1	1	6	6	6	6
MCHC	18	4	1	1	6	1	1	6	6	6	6
PT			2	2	2	2		7	2	2	2
APTT			2	2	2	2		8	2	2	2
CLOTTING TIME											

STUDY CODE	FD	FE	FG	GA	GB	GC	GZ	HA	HC	HD	HE
STUDY START DATE	3/1/90	9/22/88	4/5/88	2/25/82	11/6/84	7/10/84	10/8/85	2/12/88	8/17/87	2/9/83	11/22/85
VEHICLE	0.2% HPMC	SALINE	0.2% HPMC	0.2% HPMC	0.2% HPMC	WATER	SALINE	5% DEXTROSE	0.2% HPMC	SALINE	5% DEXTROSE
ROUTE OF ADMIN.	GAVAGE	I V	GAVAGE	GAVAGE	GAVAGE	GAVAGE	GAVAGE	I V	GAVAGE	I V	I V
HEMATOLOGY											
HEMOGLOBIN (Hb)	6	6	6	1	1	12	1	18	1	1	1
HEMATOCRIT (HCT)	6	6	6	1	1	13	1	18	1	1	1
RBC	6	6	6	1	1	14	1	18	1	1	I
WBC	6	6	6	1	1	14	1	18	1	1	1
PLATELET	6	6	6			15		3			
MCV	6	6	6	1	1		1	18	1	1	1
MCH	6	6	6	1	1		1	18	1	1	1
MCHC	6	6	6	1	1		1	18	1	1	1
PT	2	2	2		2			2	2		2
APTT	2	2	2		2			2	2		2
CLOTTING TIME						13					

TABLE 1

METHODOLOGY (Continued)

STUDY CODE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP
STUDY START DATE	11/12/81	9/16/86	7/30/85	8/22/84	4/19/83	12/13/88	11/14/83	4/4/86	7/13/83	11/19/85	11/11/86
VEHICLE	NACL+ TWEEN 20	0.2% HPMC	SALINE	0.2% HPMC	SALINE	0.2% HPMC	5% DEXTROSE	5% DEXTROSE	SALINE	5% DEXTROSE	0.2% HPMC
ROUTE OF ADMIN.	SC INJECT.	GAVAGE	GAVAGE	GAVAGE	IM INJECT.	GAVAGE	IV	IV	IV	IV	GAVAGE
HEMATOLOGY											
HEMOGLOBIN (Hb)	18		1	1	1	9	1	1	1		1
HEMATOCRIT (HCT)	18	1	1	1	1	9	1		1		1
RBC	18	1	1	1	1	9	1	1	1	1	1
WBC	18	1	1	1	1	9	1		1		1
PLATELET						9					3
MCV	18	1		1	1	9	1	1	1		1
MCH	18	1			1	9	1	1	1		1
MCHC	18	1		1	1	9	1				1
PT		2		2		10		2			2
APTT		2		2		10		2			2
CLOTTING TIME											

STUDY CODE	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA
STUDY START DATE	12/15/82	4/16/82	2/4/82	8/26/87	5/28/87	12/15/87	10/17/84	5/31/83	11/16/83	7/27/87	1/6/87
VEHICLE	SALINE	SALINE	SALINE	0.2% HPMC	0.2% HPMC	SALINE	NONE	NONE	NONE	FORMU-LATION	5% GUM ARABIC
ROUTE OF ADMIN.	IV	IM INJECT.	GAVAGE	GAVAGE	GAVAGE	IV & IP	DIET	DIET	DIET	GAVAGE	GAVAGE
HEMATOLOGY											
HEMOGLOBIN (Hb)	1	1		1	1	11	12	12	4	1	4
HEMATOCRIT (HCT)	1	1			1	11	13	13	4	1	4
RBC	1	1		1	1	11	14	14	4	1	4
WBC	1	1		1	1	11	14	14	4	1	4
PLATELET					3	11	15	14	4	3	4
MCV	1	1		1	1	11			4	1	4
MCH	1	1			I				4	1	4
MCHC	1	1			1				4	1	4
PT	2			2	2				16	2	5
APTT	2			2	2					2	5
CLOTTING TIME						13	13	13			

TABLE 1

METHODOLOGY (continued)

STUDY CODE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP
STUDY START DATE	11/12/81	9/16/86	7/30/85	8/22/84	4/19/83	12/13/88	11/14/83	4/4/86	7/13/83	11/19/85	11/11/86
VEHICLE	NACL + TWEEN 20	0.2% HPMC	SALINE	0.2% HPMC	SALINE	0.2% HPMC	5% DEXTROSE	5% DEXTROSE	SALINE	5% DEXTROSE	0.2% HPMC
ROUTE OF ADMIN.	SC INJECT.	GAVAGE	GAVAGE	GAVAGE	I M INJECT.	GAVAGE	IV	IV	IV	IV	GAVAGE
HEMATOLOGY											
HEMOGLOBIN (Hb)	18	1	1	1	1	9	1	1	1	1	1
HEMATOCRIT (HCT)	18	1	1	1	1	9	1	1	1	1	1
RBC	18	1	1	1	1	9	1	1	1	1	1
WBC	18	1	1	1	1	9	1	1	1	1	1
PLATELET						9					3
MCV	18	1	1	1	1	9	1	1	1	1	1
MCH	18	1	1	1	1	9	1	1	1	1	1
MCHC	18	1	1	1	1	9	1	1	1	1	1
PT		2		2		10		2			2
APTT		2		2		10		2			2
CLOTTING TIME											

4,

STUDY CODE	HO	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA
STUDY START DATE	12/15/82	4/16/82	2/4/82	8/26/87	5/28/87	12/15/87	10/17/84	5/31/83	1I/16/83	7/27/87	1/6/87
VEHICLE	SALINE	SALINE	SALINE	0.2% HPMC	0.2% HPMC	SALINE	NONE	NONE	NONE	FORMU-LATION	5% GUM ARABIC
ROUTE OF ADMIN.	IV	I M INJECT.	GAVAGE	GAVAGE	GAVAGE	IV & IP	DIET	DIET	DIET	GAVAGE	GAVAGE
HEMATOLOGY											
HEMOGLOBIN (Hb)	1	1	1	1	1	11	12	12	4	1	4
HEMATOCRIT (HCT)	1	1	1	1	1	ll	13	13	**4**	1	4
RBC	1	1	1	1	1	11	14	14	4	I	4
WBC	1	1	1	1	1	11	14	14	4	1	4
PLATELET					3	11	15	14	4	3	4
MCV	1	1	1	1	1	11			4	1	4
MCH	1	1	1	1	1				4	1	4
MCHC	1	1	1	1	1				4	1	4
PT	2			2	2				16	2	5
APTT	2			2	2					2	5
CLOTTING TIME						13	13	13			

TABLE 1

METHODOLOGY (continued)

STUDY CODE	1B	1C	ID	IE	IF	IG	IH	II	U	1K	IL
STUDY START DATE	4/20/83	2/17/83	8/31/83	3/3/87	12/9/89	7/29/83	1/29/87	1/29/87	9/24/87	6/30/88	12/10/87
VEHICLE	0.2% HPMC	SALINE	0.2% HPMC	0.2% HPMC	0.2% HPMC	NONE	NONE	NONE	NONE	NONE	ACETONE
ROUTE OF ADMIN.	GAVAGE	1M INJECT.	GAVAGE	GAVAGE	GAVAGE	DIET	DIET	DIET	DIET	DIET	DIET
HEMATOLOGY											
HEMOGLOBIN (Hb)	1	1	1	1	1		16	16	12	12	9
HEMATOCRIT (HC1)	1	1	1	1	1		16	16	19	19	9
RBC	1	1	1	1	1	4	16	16	21	21	9
WBC	1	1	1	1	1	4	16	16	21	21	9
PLATELET							16	16	20	20	9
MCV	1	1	1	1	1		16	16			
MCH	1	1	1	1	1						
MCHC	1	1	1	1	1						
PT				2	2						
AM				2	2						
CLOTTINGTIME											

STUDY CODE	1M	1N	1O	IP	1Q	IR	IS
STUDY START DATE	7/28/87	3/8/88	2/15/85	12/3/84	5/19/86	1 I/12/84	4/10/84
VEHICLE	0.1% CORN OIL	NONE	NONE	NONE	NONE	NONE	NONE
ROUTE OF ADMIN.	DIET	DIET	DIET	DIET	DIET	DIET	DIET
HEMATOLOGY							
HEMOGLOBIN (Hb)	4	4	4	4	4	4	4
HEMATOCRIT (HCT)	4	4	4	4	4	4	4
RBC	4	4	4	4	4	4	4
WBC	4	4	4	4	4	4	4
PLATELET	4	4	4	4	4	4	4
MCV	4	4	4	4	4	4	4
MCH	4	4	4	4	4	4	4
MCHC	4	4	4	4	4	4	4
PT							
APTT							
CLOTTING TIME							

TABLE 2
METHODS DIRECTORY

HEMATOLOGY

1. Operator Reference Manual, #4201046, Rev. B. Dec., 1977. Coulter Electronic, Inc., 590 West Twentieth Street, Hialeah, FL 33010.
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9. Coulter S-Plus-IV.
10. MLA Electra 750.
11. Coulter Counter T 660, Coulter Electronics Limited.
12. Coulter Hemoglobinometer, Coulter Electronics, Inc..
13. Micro-Capillary Centrifuge Tube.
14. Coulter Cell Counter, Coulter Electronics, Inc..
15. Baker 810 Whole Blood Platelet Analyzer, Baker Instruments Corp..
16. Lancer Coagulyzer **It,** method modified from Quick, 1966 (J. Clin. Pathol. 45, 105).
17. Coulter Cell Counter ZF.
18. Coulter S Senior.
19. Clay Adams, Autocrit Centrifuge; Clay Adams, Inc..
20. Coulter Electronics, Platelet Analyzer (P260).
21. Coulter Electronics, Coulter Counter, Model ZBI.
22. Hycel #103 Platelet Counter, Boehringer Mannheim Diagnostics Co..

TABLE 3
MALE CD® RATS

STUDY CODE:		A	GZ	EZ	**EZ**	HA	HP	HM	HO	HI	HL	**HN**	HQ
STUDY INTERVAL:		1 WK	2 WKS	2 WKS	3 WKS	4 WKS	4 WKS	4 WKS	4 WKS	4 WKS	4 WKS	4 WKS	4 WKS
STUDY START DATE:		5/27/82	10/8/85	5/15/90	5/15/90	2/12/88	1I/11/86	4/4/86	11/19/85	8/22/84	11/14/83	7/13/83	12/15/82
NUMBER OF ANIMALS:		10	8	10	5	9	9	10	10	10	it)	5	10
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	14.94	10.61	16.02	16.82	15.48	15.33	15.56	15.50	14.80	15.60	15.56	16.11
HEMATOCRIT (HCT)	%	39.71	30.64	42.60	44.76	42.34	42.52	42.48	44.50	42.63	43.05	43.26	43.97
RBC	(1X10"6/ul)	6.14	4.42	6.87	7.57	7.80	7.68	7.63	8.10	7.46	7.63	7.69	7.71
WBC	(1X10"3/uI)	7.01	7.27	14.82	13.44	10.79	11.63	10.79	12.30	9.64	8.37	6.58	9.83
PLATELET	(I X 10"3/ul)	961		1378	1154	1013	1202						
MCV	fl	65	70	62	59	56	55	56	56	58	57	56	58
MCH	pg	24.7	24.3	23.4	22.2	19.8	19.4	20.6	19.3	20.1	20.2	20.1	20.9
MCHC	g/dl	37.5	34.9	37.6	37.6	36.0	36.0	36.9	35.2	35.0	36.5	35.8	36.7
PT	(SEC)			13.32	12.86	1 1.04	10.71	1(1.35		10.60			12.99
APTT	(SEC)			19.93	18.14	15.58	18.33	15.19		17.01			19.27
CLOTTING TIME	(SEC)												

STUDY CODE:		HR	FD	FA	FC	FE	**HC**	HD	HE	HF	FE	GC	HA
STUDY INTERVAL:		4 WKS	4 WKS	4 WKS	4 WKS	4 WKS	5 WKS	5 WKS	5 WKS	5 WKS	5 WKS	5 WKS	6 WKS
STUDY START DATE:		4/16/82	3/1/90	9/29/89	9/7/89	9/22/88	8/17/87	*2/9/83*	I1/22/85	11/12/81	9/22/88	7/10/84	2/12/88
NUMBER OF ANIMALS:		10	10	10	10	9	10	10	10	10	5	10	3
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	15.19	16.70	15.55	15.61	15.59	15.11	15.50	15.29	17.00	15.00	15.57	15.50
HEMATOCRIT (HCT)	%	40.19	44.30	43.61	42.97	43.27	41.76	41.60	43.73	44.00	40.88	46.40	42.40
RBC	(I X 10"6/ul)	7.21	7.85	7.86	8.00	7.20	7.64	7.60	7.69	8.10	7.43	6.73	8.02
WBC	(1 X 10^5 3/ul)	10.40	16.78	14.03	15.29	12.78	14.26	7.90	11.51	18.60	15.24	14.51	10.20
PLATELET	(I X 10"3/ul)		1 108	1088	1090	1035					1057	875	984
MCV	11	56	57	56	54	60	56	55	58	54	55		54
MCH	pg	21.2	21.3	19.8	19.5	21.7	19.9	20.0	20.1	21.0	20.2		19.2
MCHC	g/dl	38.2	37.7	35.7	36.3	36.0	36.0	37.0	35.2	38.5	36.7		36.0
PT	(SEC)		13.69	11.69	11.25	11.32	10.36		9.44		10.74		11.23
APTT	(SEC)		22.31	17.84	14.78	16.29	15.96		15.43		17.80		16.57
CLOTTING TIME	(SEC)											184.8	

STUDY CODE:		HG	HH	HI	HI	FD	FA	HK	HS	**HK**	HT	HM	**EH**
STUDY INTERVAL:		6 WKS	6 WKS	6 WKS	6 WKS	6 WKS	6WKS	6 WKS	7 WKS	7 WKS	8 WKS	8 WKS	13 WKS
STUDY START DATE:		9/16/86	7/30/85	8/22/84	4/19/83	3/1/90	9/29/89	12/13/88	2/4/82	12/13/88	8/26/87	4/4/86	7/27/88
NUMBER OF ANIMALS:		10	10	5	10	5	5	15	10	15	10	5	10
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	15.26	15.20	14.94	15.30	15.58	15.66	15.70	15.29	15.80	15.85	15.78	15.77
HEMATOCRIT (HCT)	%	43.30	44.70	42.72	43.27	42.78	44.92	47.40	43.50	46.90	44.12	43.12	45.06
RBC	(I X10"6/u I)	7.05	7.37	7.77	7.28	7.88	8.51	7.65	6.95	7.84	7.32	8.19	8.64
WBC	(1 X I 0"3/u I)	1 1.92	10.40	9.66	7.53	13.34	15.20	14.(X)	9.58	1 1.80	15.42	12.56	12.82
PLATELET	(1X10"3/ul)					1086	1144	1178		941			I191
MCV	11	61	61	56	59	54	53	62	62	60	62	53	52
MCH	pg	21.1	20.9	19.4	20.9	19.8	18.4	20.5	22.3	2(1.1	21.4	19.46	18.3
MCHC	g/dl	35.2	34.3	35.1	35.5	36.4	34.9	33.1	36.0	33.6	35.1	36.76	35.0
PT	(SEC)	10.03		10.50		12.66	10.96	13.8		13.8	10.61	10.36	11.32
APTT	(SEC)	15.24		16.72		18.36	18.28	20.1		19.2	18.56	15.36	16.43
CLOTTING TIME	(SEC)												

TABLE 3

MALE CD® RATS (Continued)

STUDY CODE:		HF	HV	HW	HX	FB	GC	HU	GB	GA	IA	El	DW
STUDY INTERVAL:		13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS
STUDY START DATE:		11/12/81	12/15/87	10/17/84	5/31/83	10/12/89	7/10/84	5/28/87	11/6/84	2/25/82	1/6/87	2/6/85	3/8/85
NUMBER OF ANIMALS:		10	15	40	35	10	10	10	10	10	12	9	9
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	15.60	15.84	15.60	15.99	15.32	15.90	15.49	15.02	14.90	13.50	15.27	15.63
HEMATOCRIT (HCT)	%	36.00	45.66	45.80	45.90	43.55	46.00	42.33	43.71	39.(x)	44.00	43.98	44.98
RBC	(1 X 10"6/ul)	7.10	7.60	7.67	7.55	8.30	7.74	8.13	8.16	7.63	7.19	8.37	8.55
WBC	(IX10"3/ul)	12.00	19.00	18.65	13.51	14.01	15.30	13.80	10.13	7.70	12.70	12.21	13.26
PLATELET	(I X 10"3/ul)		1161	975	947	1034	867	1015			1329		
MCV	fl	50	60			53		53	54	52	61	53	53
MCH	pg	21.7				18.5		19.2	18.6	19.7	18.8	18.42	18.5
MCI-IC	g/dl	43.0				35.2		36.4	34.6	38.7	31.1	34.94	35.0
PT	(SEC)					11.42		10.86	10.05		13.30	9.81	9.8(1
APTT	(SEC)					18.79		15.8	15.87		23.50	16.06	18.60
CLOTTING TIME	(SEC)		44.04	202.2	204		189.6						

STUDY CODE:		1Q	IR	1M	IJ	1K	10	IP	IL	EG	HU	El	GA
STUDY INTERVAL:		13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	14 WK	14 WKS	17 WKS	17 WKS	17 WKS
STUDY START DATE:		5/19/86	11/12/84	7/28/87	9/24/87	6/30/88	2/15/85	12/3/84	12/10/87	11/12/86	5/28/87	2/6/85	2/25/82
NUMBER OF ANIMALS:		10	20	20	10	18	20	19	10	13	5	4	5
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	16.40	16.80	16.20	14.77	14.74	16.00	16.20	16.30	15.15	15.08	15.60	15.10
HEMATOCRIT (HCT)	%	50.70	50.60	49.70	43.20	43.28	47.70	52.1(1	44.90	41.68	41.94	43.97	38.30
RBC	(1 X I0"6/ul)	9.75	9.47	9.63	7.14	7.13	9.12	9.70	8.58	8.09	7.98	8.35	7.76
WBC	(1 X 10"3/ul)	14.50	11.50	13.10	14.59	15.11	12.40	13.70	15.40	14.57	11.40	13.50	6.80
PLATELET	(1X10"3/ul)	913	939	955	1132	1083	945	928	1035	1038	930		
MCV	ll	52	53	52			53	54		51	54	54	50
MCH	pg	16.9	17.8	16.9			17.5	16.7		18.1	19.(1	18.85	19.7
MCHC	g/dI	32.4	33.3	32.7			33.6	31.1		36.1	35.7	35.65	39.9
PT	(SEC)									10.72	11.32	9.57	
APTT	SEC									14.97	19.88	17.27	
CLOTTING TIME	(SEC)												

STUDY CODE:		GB	HF	HY	IA	EO	FG	IB	IC	HW	FIX	HV	IQ
STUDY INTERVAL:		17 WKS	25 WKS	25 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS
STUDY START DATE:		11/6/84	11/12/81	11/16/83	1/6/87	10/8/86	4/5/88	4/20/83	2/I7/83	10/17/84	5/31/83	12/15/87	5/19/86
NUMBER OF ANIMALS:		5	10	8	12	10	20	9	10	40	35	I5	20
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	15.04	15.90	16.70	15.10	15.22	15.55	14.70	14.86	15.35	15.14	15.78	16.00
HEMATOCRIT (HCT)	%	43.50	37.30	50.00	42.00	40.59	43.81	41.10	40.88	45.60	44.50	44.81	48.70
RBC	(1 X 10"6/u I)	8.49	7.60	8.93	7.15	8.13	8.00	8.24	8.49	7.39	7.72	7.50	9.35
WBC	(1X10"3/u I)	9.82	12.90	10.(10	9.70	17.89	11.82	7.70	8.36	16.15	12.87	12.40	12.00
PLATELET	(I X10"3/ul)			578	1480		983			955	961	1054	904
MCV	fl	52	49	56	59	49	55	50	48			60	52
MCH	pg	17.8	21.1	19.0	21.1	18.1	19.5	17.8	17.4				17.1
MCHC	g/dl	34.7	42.9	33.0	35.7	37.2	35.5	35.8	36.2				32.8
PT	(SEC)	9.74		14.10	12.30		11.10						
APTT	SEC	15.18			16.40		15.19						
CLOTTING TIME	SE)									194.4	230.4	50.1	

TABLE 3

MALE CD® RATS (continued)

STUDY CODE:		A	IR	IM	IN	IP	1K	10	IJ	IE	ID	IL	FG
STUDY INTERVAL:		26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	27 WKS	27 WKS	27 WKS	27 WK	30 WKS
STUDY START DATE:		5/27/82	11/12/84	7/28/87	3/8/88	12/3/84	6/30/88	2/15/85	9/24/87	3/3/87	8/31/83	12/10/87	4/5/88
NUMBER OF ANIMALS:		10	20	20	10	20	20	18	9	13	14	10	3
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	16.78	16.10	15.00	16.60	16.40	15.06	15.90	14.94	15.24	14.96	16.20	14.13
HEMATOCRIT (HCT)	%	43.73	50.20	48.10	48.60	45.80	44.55	43.10	43.56	41.40	41.23	45.40	39.17
RBC	(IX10^6/ul)	8.75	9.44	9.22	9.65	9.66	7.61	9.32	7.37	8.03	8.31	8.62	7.40
WBC	(IX10^3/ul)	8.10	11.60	12.30	13.50	10.80	11.85	11.50	11.57	11.95	6.57	15.(X)	16.70
PLATELET	(1X10^3/ul)	1404	931	1061	1052	887	988	911	1169			1119	1008
MCV	fl	50	53	52	50	47		46		53	50		53
MCH	pg	19.2	17.1	16.3	17.3	16.9		17.1		19.1	18.2		19.0
MCHC	g/dl	38.1	32.1	31.2	34.3	35.7		36.9		36.6	36.3		35.9
VT	(SEC)									10.9			10.77
APTT	(SEC)									16.37			15.03
CLOTTING TIME	(SEC)												

STUDY CODE:		IL	HY	HY	HW	11X	EO	IQ	IS	IR	A	IJ	IN
STUDY INTERVAL:		32 WK	38 WKS	51 WKS	52 WKS	52 WKS	52 WKS	52 WKS	52 WKS	52 WKS	52 WKS	52 WKS	52 WKS
STUDY START DATE:		12/10/87	1 I /16/83	1 1/16/83	10/ 1 7/84	5/3 1/83	I 0/8/86	5/ I 9/86	4/ 1 0/84	1 1/1 2/84	5/27/82	9/24/87	3/8/88
NUMBER OF ANIMALS:		10	8	8	40	35	18	19	10	10	10	10	10
PARAMETER	UNITS												
HEMOGLOBIN (Fib)	g/dI	16.10	16.50	16,90	15.36	14.48	15.01	15.60	14.90	14.50	15.56	14.68	15.40
HEMATOCRIT (HCT)	%	45.30	51.00	49.00	45.10	43.40	40.91	45.40	44.90	42.00	40.00	43.80	45.40
RBC	(1 X 1 0^ 6/u I)	8.73	9.36	8.85	7.95	7.10	8.00	8.99	8.46	8.65	8.05	7.09	9.(X)
WBC	(1XIO"3/ul)	11.60	9.50	12.60	14.65	12.16	12.38	10.20	6.00	5.50	9.93	10.33	7.60
PLATELET	(1 X 1 0"3/ul)	1064	409	509	966	851		867	903	89 I	952	1123	1207
MCV	Il		54	56			53	51	53	48	50		51
MCH	pg		18.0	19.0			18.5	17.4	17.6	16.8	19.3		17.1
MCHC	g/dl		33.0	34.0			35.8	34.5	33.1	34.6	38.7		33.8
PT	(SEC)		14.30	13.30									
APTT	(SEC)												
CLOTTING TIME	(SEC)				192.6	221.4							

STUDY CODE:		IM	1K	IP	10	IF	IL	IM	HQ	1K	HW	HY	IQ
STUDY INTERVAL:		52 WKS	52 WKS	52 WKS	52 WKS	53 WKS	53 WK	56 WKS	56 WKS	56 WKS	66 WKS	77 WKS	78 WKS
STUDY START DATE:		7/28/87	6/30/88	12/3/84	2/15/85	12/9/89	12/10/87	7/28/87	12/15/82	6/30/88	10/17/84	1/16/83	5/19/86
NUMBER OF ANIMALS:		10	30	10	10	10	10	10	5	10	40	8	20
PARAMETER	UNITS												
HEMOGLOBIN (Fib)	g/dl	15.60	14.35	14.40	15.20	16.03	15.30	16.50	15.18	14.89	14.89	15.90	15.90
HEMATOCRIT (HCT)	%	44.60	43.80	41.80	42.90	43.94	45.10	48.70	39.58	42.80	44.90	45.00	48.40
RBC	(1X 10"6/ul)	9.11	7.31	8.61	9.19	7.86	8.44	9.31	7.41	7.49	7.45	8.42	8.84
WBC	(1 X1 0"3/u I)	5.80	11.09	6.90	7.10	12.52	11.40	9.10	10.24	10.48	13.69	11.40	11.10
PLATELET	(1X10"3/ul)	1083	1063	966	922		1148	1041		870	927	792	953
MCV	11	49		49	47	57		53	54			54	55
MCH	pg	17.1		16.7	16.5	20.3		17.8	20.5			19	18.0
MCHC	g/dl	34.9		34.3	35.3	35.9		33.8	38.6			35	32.8
PT	(SEC)					11.10			12.52			14.6	
APTT	(SEC)					16.27			19.00				
CLOTTING TIME	(SEC)										214.2		

TABLE 3

MALE CD® RATS (Continued)

STUDY CODE:		IR	IS	A	IP	IJ	IN	IM	10	**HX**	IL	IK	IK
STUDY INTERVAL:		78 WKS	78 WKS	78 WKS	78 WKS	78 WKS	78 WKS	78 WKS	78 WKS	79 WKS	79 WK	79 WKS	98 WKS
STUDY START DATE:		I1/12/84	4/10/84	5/27/82	12/3/84	9/24/87	3/8/88	7/28/87	2/15/85	5/31/83	12/10/87	6/30/88	6/30/88
NUMBER OF ANIMALS:		20	19	10	18	9	10	20	18	35	10	16	10
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	15.40	15.40	14.40	15.60	14.52	1590	16.40	15.20	15.40	14.10	14.57	14.46
HEMATOCRIT (HCT)	75	45.90	45.10	39.92	48.80	43.44	4750	50.40	48.10	46.30	41.50	43.81	43.70
RBC	(I X W6/dB	8.90	9.21	7.47	9.10	7.28	8.09	9.06	8.94	7.50	7.63	6.97	7.00
WBC	(1X111"3/ul)	10.80	10.20	11.56	1(1.9(1	10.22	1330	11.30	13.60	12.51	15.20	11.34	10.07
PLATELET	(1 X 10"3/u I)	1006	938	1343	921	1063	968	1057	1 102	1014	1 171	983	1027
MCV	fl	52	49	54	54		53	56	54				
MCH	pg	17.4	16.7	19.3	17.2		17.7	18.2	16.0				
MCHC	g/dl	33.7	34.1	36.0	32.0		33.6	32.6	29.8				
PT	(SEC)												
APTT	(SEC)												
CLOTTING TIME	(SEC)									217.8			

STUDY CODE:		HY'	IJ	IP	IN	IM	10	IG	10	IR	IS	A	IL
STUDY INTERVAL:		103 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	105 WK
STUDY START DATE:		1 1/16/83	9/24/87	12/3/84	3/8/88	7/28/87	2/15/85	7/29/83	5/19/86	11/12/84	4/10/84	5/27/82	12/I0/87
NUMBER OF ANIMALS:		8	10	15	9	17	1(1	50	17	20	20	10	10
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	gtdl	14.40	12.71	12.60	13.00	13.80	15.00		14,30	14.10	13.70	12.18	14.40
HEMATOCRIT (HCT)		43.00	39.70	39.40	38.90	39.70	45.7(1		44.50	42.40	39.20	36.07	42.00
RBC	(1 X 10"6/ul)	7.41	6.50	7.01	7.20	7.56	8.05	6.53	8.26	7.92	7.98	7.27	7.80
WBC	(1 X I O"3/ul)	14.70	15.78	9.00	5.50	7.30	7.0(1	17.00	7.30	8.40	6.20	11.54	17.90
PLATELET	(IX10"3/ul)	619	1277	939	1019	1145	961		987	1026	926	1157	925
MCV	ll	58		56	55	53	57		54	54	49	49	
MCH	pg	20.0		18.1	18.3	18.3	18.7		17.3	17.8	17.2	16.59	
MCHC	g/dl	34.0		31.9	33.5	34.8	32.8		32.1	33.3	35.0	33.71	
PT	(SEC)	15.3											
APTT	(SEC)												
CLOTTING TIME	(SEC)												

STUDY CODE:		ll	IH
STUDY INTERVAL:		106 WKS	106 WKS
STUDY START DATE:		1/29/87	1/29/87
NUMBER OF ANIMALS:			?
PARAMETER	UNITS		
HEMOGLOBIN (Hb)	gJdl	14.16	14.26
HEMATOCRIT (HCT)	%	41.25	41.26
RBC	(IXIO'6/ul)	6.85	6.82
WBC	(1 X I O'3/ul)	10.10	10.45
PLATELET	(1X1(1"3/ul)	1014	953
MCV	fl	60	61
MCH	pg		
MCHC	g/dl		
PT	(SEC)		
APTT	(SEC)		
CLOTTING TIME	(SEC)		

TABLE 4

FEMALE CD® RATS

STUDY CODE:		A	GZ	EZ	EZ	HA	HP	HM	HO	HI	HL	HN	HQ
STUDY INTERVAL:		I WK	2 WKS	2 WKS	3 WKS	4 WKS	4 WKS	4 WKS	4 WKS	4 WKS	4 WKS	4 WKS	4 WKS
STUDY START DATE:		5/27/82	10/8/85	5/15/90	5/15/90	2/12/88	1	4/4/86	1I/19/85	8/22/84	11/14/83	7/13/83	12/15/82
NUMBER OF ANIMALS:		8	9	10	**5**	10	10	10	10	10	9	5	10
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	14.39	9.90	15.83	16.16	14.61	15.44	15.33	14.80	14.74	15.28	13.94	15.51
HEMATOCRIT (HCT)	%	37.94	27.64	43.50	43.92	40.60	42.71	42.81	**43.30**	42.59	42.62	39.12	42.78
RBC	(1X10^6/ul)	6.00	4.19	7.01	7.47	7.32	7.61	7.34	7.49	7.25	7.45	7.24	7.43
WBC	(1 X 10"3/u l)	4.89	10.56	13.55	10.48	1 1.58	8.47	10.58	6.60	9.54	6.51	4.48	8.35
PLATELET	(1X10"3/ul)	1010		1244	1049	1139	1151						
MCV	Fl	64	66	62	59	57	56	59	59	59	58	54	58
MCH	pg	24.4	23.9	22.6	21.6	19.9	19.8	21.1	20.0	20.6	20.3	19.1	20.9
MCHC	g/dl	37.8	36.1	36.4	36.8	35.5	36.1	36.0	34.5	34.8	36.1	35.4	36.4
PT	(SEC)			13.13	12.88	10.51	9.92	9.57		9.94			12.68
APTT	(SEC)			17.59	13.60	12.33	14.98	10.84		12.33			17.98
CLOTTING TIME	(SEC)												

STUDY CODE:		HR	FD	FA	FC	FE	HC	HD	HE	HF	FE	GC	HA
STUDY INTERVAL:		4 WKS	4 WKS	4 WKS	4 WKS	4 WKS	5 WKS	5 WKS	5 WKS	5 WKS	5 WKS	5 WKS	6 WKS
STUDY START DATE:		4/16/82	3/1/90	9/29/89	9/7/89	9/22/88	8/17/87	2/9/83	II/22/85	11/12/81	9/22/88	7/10/84	2/I2/88
NUMBER OF ANIMALS:		10	10	10	9	9	10	10	10	10	5	10	3
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	15.32	16.40	15.24	15.00	15.59	15.22	15.60	14.34	16.00	15.12	15.89	15.30
HEMATOCRIT (HCT)	`%	40.88	44.53	42.90	41.71	43.99	42.13	42.60	41.46	41.00	42.10	46.50	42.03
RBC	(I X 10^6/ul)	7.43	7.86	7.47	7.55	7.25	7.63	7.48	7.10	7.60	7.25	7.13	7.72
WBC	(I X I0^3/ul)	5.97	11.67	12.41	11.10	9.48	10.05	5.10	6.32	10.60	10.32	10.67	8.70
PLATELET	(1 X I 0^3/u1)		1 128	1 102	1201	1 179					1 163	961	983
MCV	11	56	57	58	55	61	57	57	59	54	58		56
MCH	pg	20.8	20.9	20.4	19.9	21.6	20.0	20.6	20.4	21.1	20.9		19.7
MCHC	g/dl	37.9	36.9	35.5	36.0	35.5	35.8	36.7	34.8	38.8	35.9		35.9
PT	(SEC)		12.87	10.04	10.53	10.69	10.28		9.31		10.16		10.57
APTT	(SEC)		17.54	14.211	13.53	13.07	14.66		12.86		15.20		12.20
CLOTTING TIME	(SEC)											190.8	

STUDY CODE:		HG	HH	**liI**	HJ	FD	FA	HK	HS	HK	H'I'	HM	HZ
STUDY INTERVAL:		6 WKS	6 WKS	6 WKS	6 WKS	6 WKS	6 WKS	6 WKS	7 WKS	7 WKS	8 WKS	8 WKS	13 WKS
STUDY START DATE:		9/16/86	7/30/85	8/22/84	4/19/83	3/1/90	9/29/89	12/13/88	2/4/82	12/13/88	8/26/87	4/4/86	7/27/87
NUMBER OF ANIMALS:		10	10	5	10	5	5	15	10	15	111	5	10
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	15.28	15.60	14.90	15.67	15.52	15.28	15.90	15.40	16.20	16.06	15.98	15.24
HEMATOCRIT (HCT)	%	42.68	45.00	42.80	44.09	43.82	43.02	47.60	43.56	46.10	44.93	43.78	42.31
RBC	(IX] 0'6/61)	7.12	7.45	7.68	7.40	7.69	7.87	7.91	7.12	8.05	7.46	8.06	7.67
WBC	(1X10^3/ul)	8.58	6.70	7.04	7.02	10.20	12.22	10.20	5.98	8.60	11.25	6.90	13.35
PLATELET	(IX I (1"3/ul)					1037	1079	1079		987			1 109
MCV	II	59	61	56	60	57	55	60	61	57	62	55	57
MCH	pg	20.9	21.1	19.6	21.0	20.2	19.5	20.3	22.0	20.2	21.2	20.0	19.6
MCHC	g/dl	35.8	34.9	35.0	35.6	35.4	35.5	33.7	36.3	35.3	34.8	36.8	35.1
PT	(SEC)	9.86		9.66		13.14	10.04	13.80		13.90	10.26	9.%	10.23
APTT	(SEC)	13.69		14.24		17.84	14.56	18.70		12.80	15.52	13.68	14.94
CLOTTING TIME	(SEC)												

TABLE 4

FEMALE CD® RATS (Continued)

STUDY CODE:		EH	HF	HV	HW	HX	FB	GC	HU	GB	GA	IA	EI
STUDY INTERVAL:		13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS
STUDY START DATE:		7/27/88	11/12/81	12/15/87	10/17/84	5/31/83	10/12/89	7/10/84	5/28/87	11/6/84	2/25/82	1/6/87	2/6/85
NUMBER OF ANIMALS:		10	10	15	40	35	10	10	10	10	10	12	9
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	15.63	15.90	14.45	15.46	15.62	15.44	16.00	15.21	15.20	14.80	13.30	14.79
HEMATOCRIT (1-ICT)	%	44.27	36.90	42.85	44.90	44.70	43.88	45.80	41.91	44.18	39.90	43.00	42.70
RBC	(I X 10^6/u1)	7.78	7.10	6.68	6.67	7.04	8.01	7.94	7.60	8.14	7.44	6.89	7.75
WBC	(IX10^3/ul)	9.60	7.60	8.25	14.38	11.89	9.30	11.77	8.75	8.10	5.80	9.50	7.08
PLATELET	(1X10^3/ul)	1107		1116	1008		1063	**766**	981			1308	
MCV	fl	57	52	64			55		56	55	54	62	56
MCH	pg	20.2	22.5				19.3		20.1	18.9	20.1	19.4	19.2
MCHC	g/dl	35.3	43.0				35.2		36.1	34.7	37.5	31.1	34.9
PT	(SEC)	10.88					10.91		10.21	9.60		13.10	9.29
APTT	(SEC)	15.11					17.14		14.08	14.17		23.30	13.33
CLOTTING TIME	(SEC)			27.48	200.4	198		184.8					

STUDY CODE:		DW	1R	IQ	IK	IJ	1P	1M	10	IL	EG	HU	EI
STUDY INTERVAL:		13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	13 WKS	14 WKS	14 WKS	17 WKS	17 WKS
STUDY START DATE:		3/8/85	11/12/84	5/19/86	6/30/88	9/24/87	12/3/84	7/28/87	2/15/85	12/10/87	11/12/86	5/28/87	2/6/85
NUMBER OF ANIMALS:		9	20	10	18	10	20	20	20	10	13	5	4
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	15.41	16.00	16.40	14.80	14.65	15.20	16.20	15.30	15.90	15.71	14.70	15.48
HEMATOCRIT (HCT)	%	43.63	50.00	51.60	42.61	43.60	48.20	50.80	43.80	44.30	43.17	41.26	44.30
RBC	(1X10"6/ul)	8.20	8.94	9.13	6.97	6.69	8.31	8.99	8.30	8.09	8.17	7.32	8.08
WBC	(1X10^3/u I)	7.36	8.80	7.20	7.92	6.80	8.00	8.00	8.90	10.60	8.54	9.18	7.88
PLATELET	(1X10"3/ul)		952	943	904	1059	941	939	878	1052	887	1024	
MCV	fl	54	56	57			58	57	53		52	58	55
MCH	pg	19.0	17.9	18.0			18.3	18.1	18.0		18.6	20.1	19.3
MCHC	g/dl	35.6	32.1	31.9			31.5	32.0	35.0		36.1	35.4	35.2
PT	(SEC)	9.60									10.53	10.40	9.26
APTT	(SEC)	15.74									13.82	18.50	14.54
CLOTTING TIME	(SEC)												

STUDY CODE:		GA	GB	HF	HY	IA	EO	FG	1B	IC	HW	HX	HV
STUDY INTERVAL:		17 WKS	17 WKS	25 WKS	25 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS
STUDY START DATE:		2/25/82	11/6/84	11/12/81	11/16/83	1/6/87	10/8/86	4/5/88	4/20/83	2/17/83	10/17/84	5/31/83	12/15/87
NUMBER OF ANIMALS:		5	5	10	8	12	10	20	9	10	40	35	15
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	14.60	14.98	14.70	16.40	14.60	14.01	14.77	15.30	15.22	15.74	15.22	15.17
HEMATOCRIT (HCT)	%	38.70	43.40	34.20	49.00	41.00	37.32	41.56	42.80	42.33	45.00	43.70	43.01
RBC	(I X $10^2$6/u1)	7.31	7.84	6.50	8.13	6.56	7.12	7.08	7.96	7.87	6.84	7.23	6.86
WBC	(IX10^3/uI)	5.30	6.16	6.5(1	6.70	11.2(1	10.19	9.70	5.80	4.41	10.94	10.14	8.02
PLATELET	(I X 10^3/ul)				590	1584		929			628		911
MCV	fl	53	56	52	60	63	52	59	54	54			63
MCH	pg	20.1	19.2	22.8	20.0	22.2	19.0	20.9	19.1	19.2			
MCHC	p,/dl	38.1	34.7	43.4	34.0	35.3	37.2	35.5	35.5	35.8			
PT	(SEC)		9.52		13.10	12.30		10.68					
APTT	(SEC)		15.34			19.70		13.39					
CLOTTINGTIME	(SEC)										201	231	55.02

TABLE 4

FEMALE CD® RATS (continued)

STUDY CODE:	IQ	1R	A	IK	IP	IN	IM	IO	IE	ID	IL	IJ
STUDY INTERVAL:	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	26 WKS	27 WKS	27 WKS	27 WKS	27 WKS
STUDY START DATE:	5/19/86	11/12/84	5/27/82	6/30/88	12/3/84	3/8/88	7/28/87	2/15/85	3/3/87	8/31/83	12/10/87	9/24/87
NUMBER OF ANIMALS:	20	20	10	17	20	10	20	21)	13	14	I0	10
PARAMETER UNITS												
HEMOGLOBIN (Hb) g/dl	16.00	15.80	16.10	14.74	15.60	16.20	15.60	15.20	15.39	15.23	16.10	14.10
HEMATOCRIT (HCT) %	48.10	48.40	41.46	43.06	43.x)	46.90	47.20	42.00	42.27	41.77	45.10	41.40
RBC (1 X 10"6/ul)	8.66	8.78	7.71	7.32	8.44	8.61	8.50	8.34	7.56	7.69	8.16	6.50
WBC (1X10"3/ul)	6.90	8.10	5.73	7.25	6.40	8.6(1	7.00	8.10	6.91	5.39	8.70	6.18
PLATELET (1 X 10"3/ul)	878	891	1 106	91 1	772	994	952	804			1045	990
MCV fl	56	55	54		52	55	56	51	57	55		
MCH pg	18.5	18.1	20.8		18.6	18.9	18.4	18.2	20.4	20.1		
MCHC g/dl	33.3	32.7	38.6		35.6	**34.6**	33.1	36.1	36.2	36.4		
PT (SEC)									10.31			
APTT (SEC)									14.47			
CLOTTING TIME (SEC)												

STUDY CODE:	FG	HY	HY	IR	IS	HW	HX	EO	IQ	A	IK	IJ
STUDY INTERVAL:	30 WKS	38 WKS	51 WKS	52 WKS	52 WKS	52 WKS	52 WKS	52 WKS	52 WKS	52 WKS	52 WKS	52 WKS
STUDY START DATE:	4/5/88	11/16/83	I 1 / 16/83	1 I / 12/84	4/ 10/84	10/1784	5/31 /83	10/8/86	31551	5/27/82	6/30/88	9/24/87
NUMBER OF ANIMALS:	3	8	8	10	10	40	35	18	20	1 0	30	10
PARAMETER UNITS												
HEMOGLOBIN (Hb) g/dl	14.56	15.60	16.50	13.90	14.70	15.77	14.28	15.08	14.70	16.11	14.21	14.32
HEMATOCRIT (HCT) %	40.86	49.00	48.00	39.90	43.30	45.30	42.30	41.58	44.10	40.88	41.93	42.00
RBC (I X I 0"6/ul)	7.28	8.36	7.85	7.81	7.63	7.43	6.52	7.52	8.05	7.68	7.10	6.51
WBC (1 X I 0"3/ul)	9.18	5.70	7.40	1.80	3.20	9.69	9.53	7.98	5.50	6.00	6.03	5.58
PLATELET (I X 10^3/ul)	1056	412	485	727	767	774			832	903	849	897
MCV fl	56	59	61	51	57			57	55	53		
MCH pg	20.0	19.0	21.0	17.8	19.3			19.8	18.4	21.0		
MCHC g/dl	35.6	32.0	34.0	34.8	33.9			35.4	33.4	39.2		
PT (SEC)	10.62	13.30	12.30									
APTT (SEC)	15.16											
CLOTTING TIME (SEC)						196.8	225.6					

STUDY CODE:	IP	IN	IM	[O	IF	IL	HQ	IK	IM	11W	HY	IQ
STUDY INTERVAL:	52 WKS	52 WKS	52 WKS	_52 WKS	53 WKS	53 WKS	56 WKS	56 WKS	56 WKS	66 WKS	77 WKS	78 WKS
STUDY START DATE:	12/3/84	3/8/88	7/28/87	2/15/85	12/9/89	12/10/87	12/15/82	6/30/88	7/28/87	10/17/84	11/16/83	5/19/86
NUMBER OF ANIMALS:	10	10	10	IO	10	10	5	9	10	40	8	20
PARAMETER UNITS												
HEMOGLOBIN (Hb) g/dl	14.20	15.30	14.70	14.90	15.54	15.10	15.26	15.04	15.80	15.64	16.20	15.00
HEMATOCRIT (HCT) %	41.00	45.10	41.50	42.00	42.47	44.80	41.18	43.00	45.90	46.00	46.00	45.10
RBC (I X 10^6/ul)	7.86	7.95	7.73	8.16	7.64	7.87	7.36	7.10	8.48	7.16	8.01	8.13
WBC (1X10^3/ul)	3.00	3.70	2.70	4.00	9.37	6.70	6.84	6.36	5.40	8.99	7.70	6.90
PLATELET (IX10^3/ul)	715	935	879	755		1010		894	993	784	593	832
MCV fl	52	57	54	51	57		56		54		57	56
MCH pg	18.1	19.2	19.1	18.2	20.2		20.7		18.6		20.0	18.5
MCHC g/dl	34.7	33.8	35.5	35.5	36.0		37.1		34.4		36.0	33.3
PT (SEC)					10.44		12.70				14.50	
APTT (SEC)					14.17		18.08					
CLOTTING TIME (SEC)										2046		

TABLE 4

FEMALE CD® RATS (Continued)

STUDY CODE:		IS	A	1R	1J	IP	IN	1M	IO	IL	IK	FIX	IK
STUDY INTERVAL:		78 WKS	78 WKS	78 WKS	78 WKS	78 WKS	78 WKS	78 WKS	78 WKS	79 WKS	79 WKS	79 WKS	98
STUDY START DATE:		4/10/84	5/27/82	11/12/84	9/24/87	12/3/84	3/8/88	7/28/87	2/15/85	12/10/87	6/30/88	5/31/83	6/30/88
NUMBER OF ANIMALS:		19	8	20	9	20	10	20	20	10	15	35	13
PARAMETER	UNITS												
HEMOGLOBIN (fib)	g/dl	14.90	15.01	14.90	13.81	14.90	15.3(1	15.70	14.40	13.90	14.31	15.39	13.12
HEMATOCRIT (HCT)	%	42.50	41.85	43.60	40.44	47.20	47.5(1	48.10	44.90	40.60	42.00	45.90	38.85
RBC	(1X10"6/ul)	8.02	7.30	8.22	6.55	8.13	8.01	8.39	7.98	6.79	6.32	7.10	5.99
WBC	(1 X 10"3/01)	6.10	10.18	7.60	7.20	6.80	6.8(1	7.10	8.50	10.10	6.82	6.34	7.03
PLATELET	(I X I0^3/ul)	774	1 133	898	843	884	847	910	1030	1044	801		776
MCV	11	53	57	53		58	60	57	56				
MCH	pg	18.5	20.6	18.2		18.3	19.2	18.7	18.1				
MCHC	g/dl	35.0	**35.9**	34.1		31.6	32.3	32.6	32.1				
PT	(SEC)												
APTT	(SEC)												
CLOTTING TIME	(SEC)											223.8	

STUDY CODE:		10	IIY	IJ	IP	IN	IM	IG	IQ	IR	IS	A	IL
STUDY INTERVAL:		100 WKS	103 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	104 WKS	105 WKS
STUDY START DATE:		2/15/85	11/16/83	9/24/87	12/3/84	3/8/88	7/28/87	7/29/83	5/19/86	11/12/84	4/10/84	5/27/82	12/10/87
NUMBER OF ANIMALS:		13	8	10	20	9	16	50	15	19	16	10	10
PARAMETER	UNITS												
HEMOGLOBIN (Hb)	g/dl	12.80	14.20	12.67	13.50	13.20	13.30		12.60	13.20	14.00	15.22	13.30
HEMATOCRIT (HCT)	%	38.70	41.00	37.30	40.7(1	40.30	38.30		40.80	39.40	39.10	44.82	38.90
RBC	(1X10"6/ul)	6.72	7.01	6.01	6.86	6.58	6.80	6.44	6.61	7.(X)	7.35	8.20	6.60
WBC	(1X10"3/ul)	8.40	8.70	12.40	6.10	3.40	5.40	8.00	7.20	5.60	4.10	5.85	11.60
PLATELET	(1X10"3/ul)	903	544	1119	1018	871	781		925	799	768	832	944
MCV	fl	58	60		60	62	57		63	56	53	55	
MCH	pg	19.1	21.0		20.0	20.3	19.7		19.4	18.9	19.1	18.6	
MCHC	g/dl	33.0	34.0		33.2	32.8	34.7		31.0	33.5	35.8	33.9	
PT	(SEC)		15.20										
APTT	(SEC)												
CLOTTING TIME	(SEC)												

STUDY CODE:		Il	IH
STUDY INTERVAL:		106 WKS	106 WKS
STUDY START DATE:		1/29/87	1/29/87
NUMBER OF ANIMALS:		?	?
PARAMETER	UNITS		
HEMOGLOBIN (Hb)	g/dl	14.17	13.79
HEMATOCRIT (HCT)	%	41.06	39.52
RBC	(I X 10^6/ul)	6.50	6.23
WBC	(IX10"3/ul)	7.17	9.26
PLATELET	(IX1(1"3/ui)	765	791
MCV	fl	63	63
MCH	pg		
MCHC	g/dl		
PT	(SEC)		
APTT'	(SEC)		
CLOTTING TIME	(SEC)		

FIGURE Ia
HEMOGLOBIN
MALE CD®') RATS

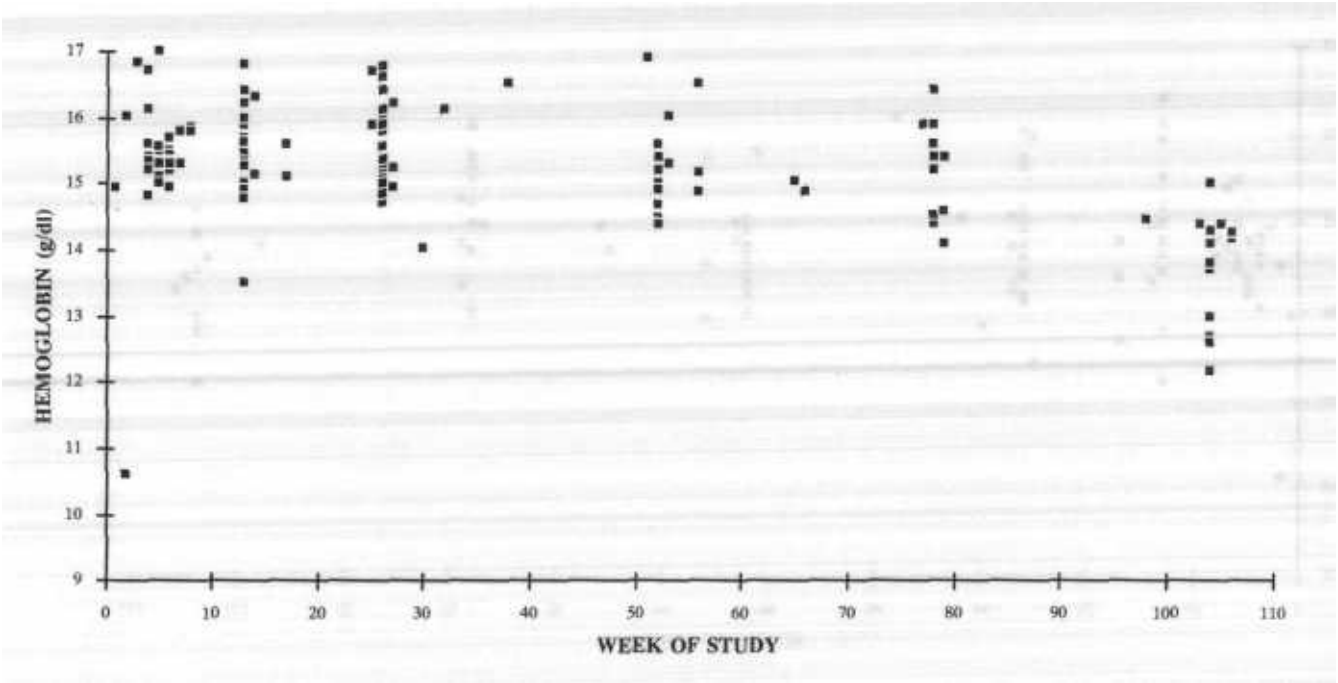


FIGURE Ib
HEMOGLOBIN
FEMALE CD® RATS

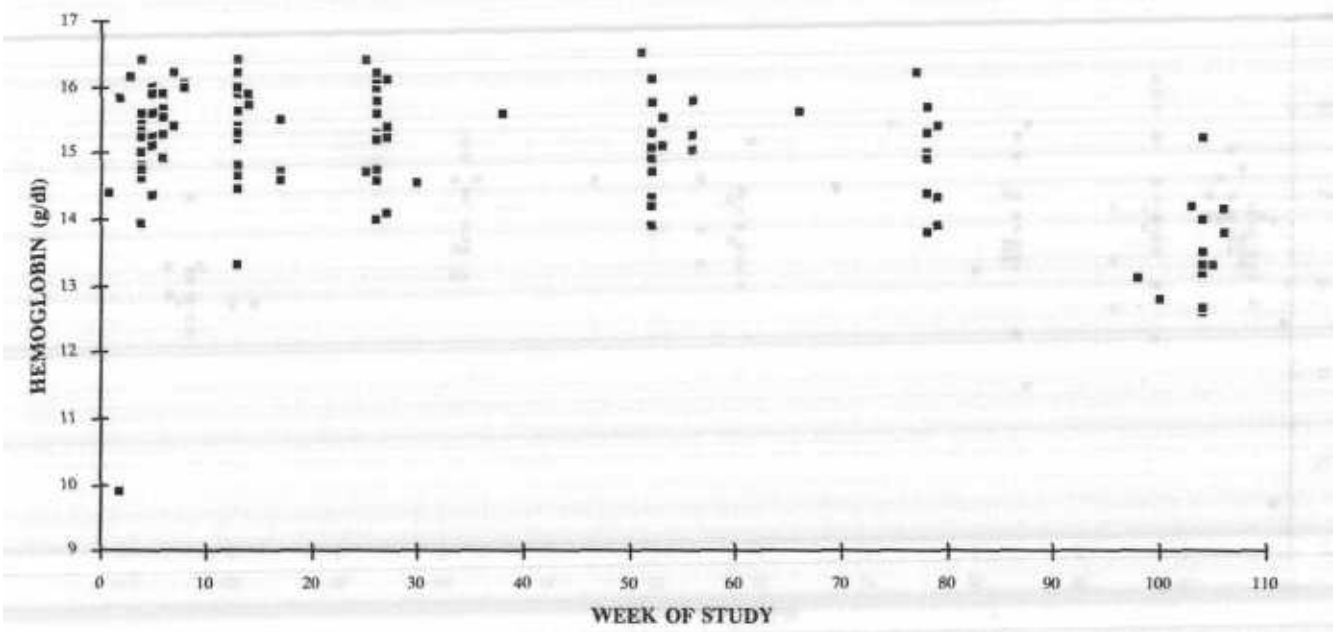


FIGURE 2a
HEMATOCRIT
MALE CD® RATS

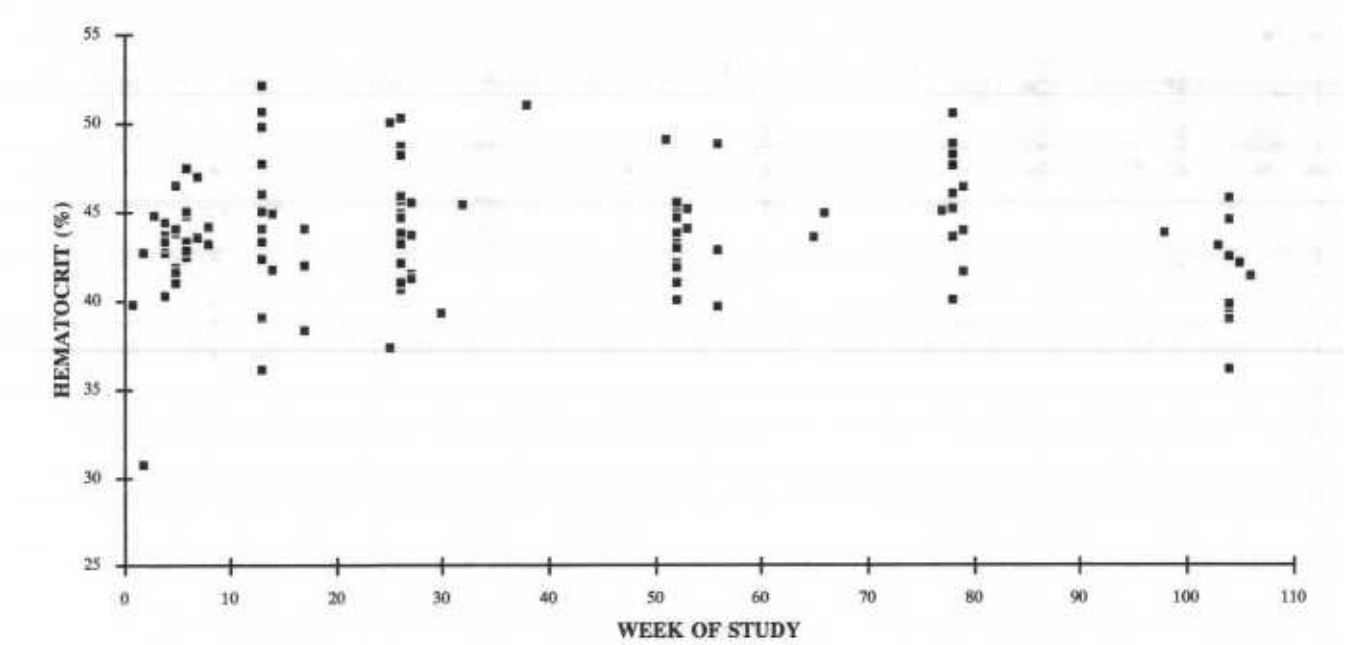


FIGURE 2b
HEMATOCRIT
FEMALE CD® RATS

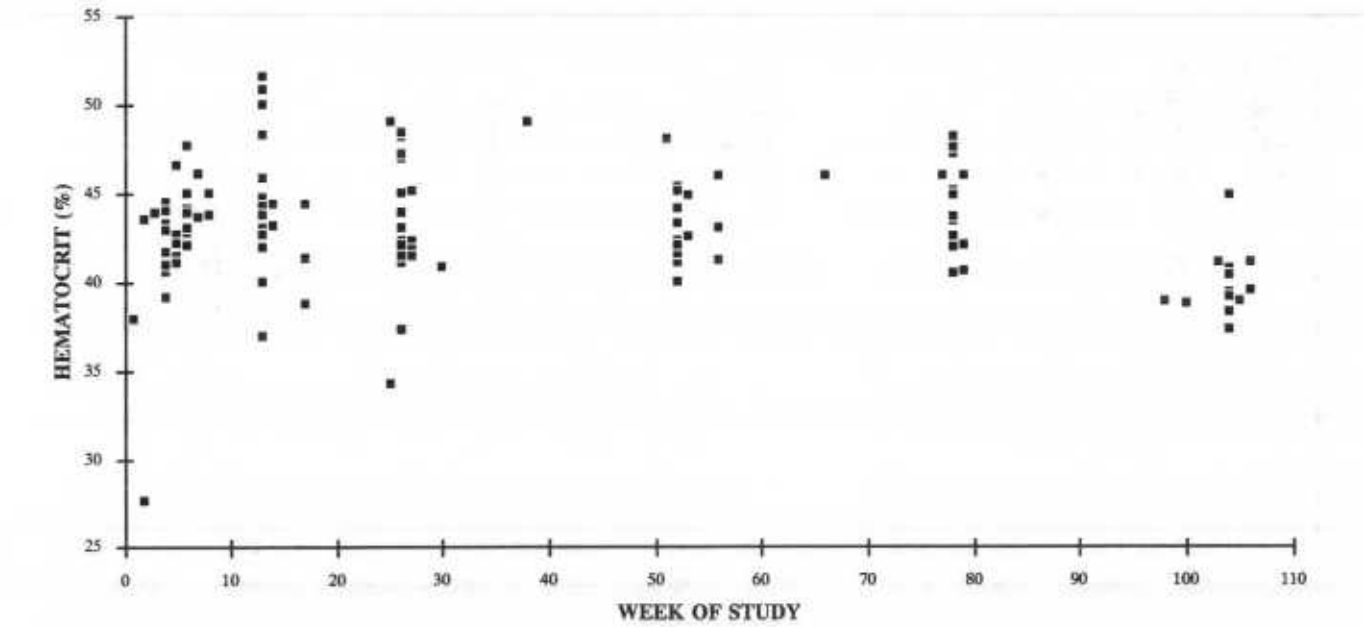


FIGURE 3a
RED BLOOD CELL COUNT
MALE CD® RATS

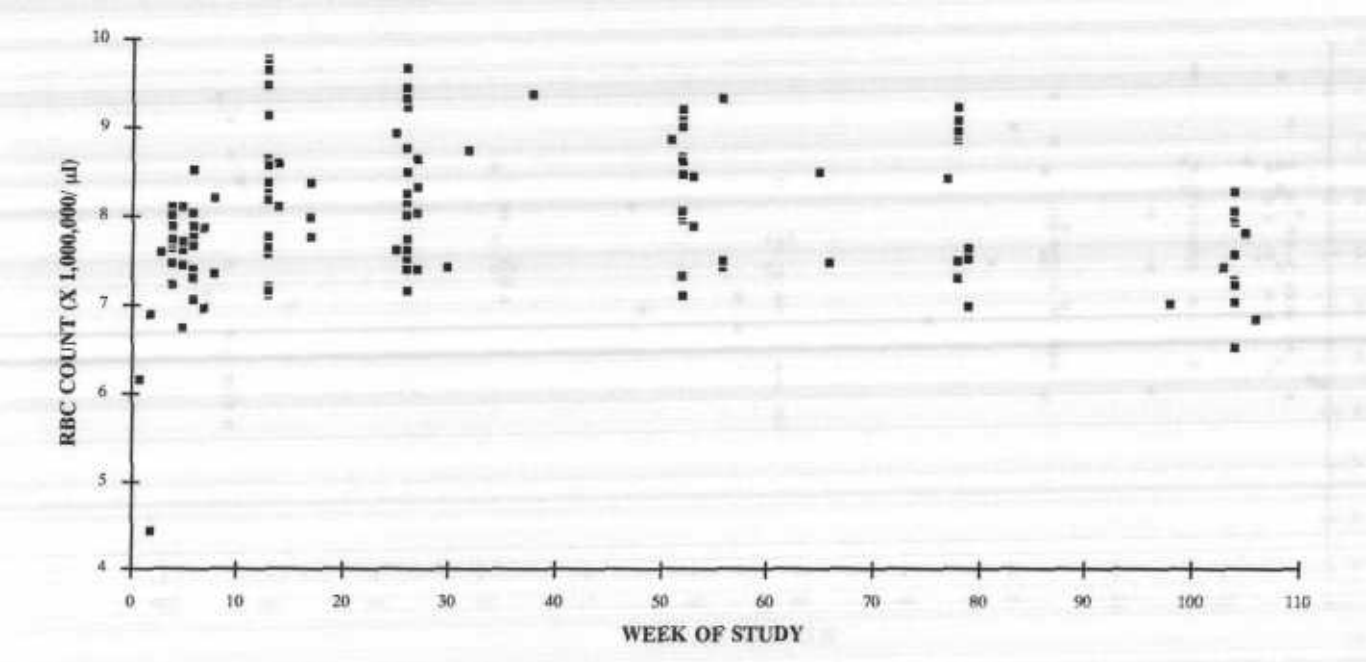


FIGURE 3b
RED BLOOD CELL COUNT
FEMALE CD® RATS

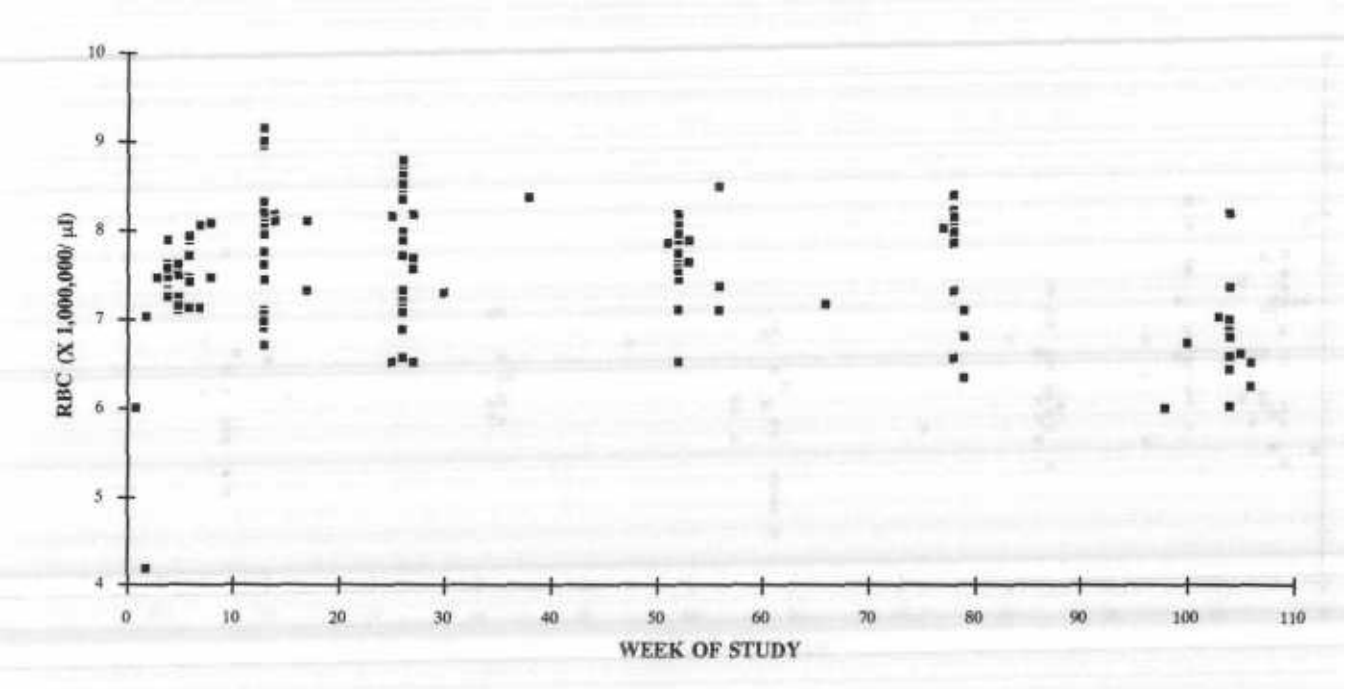


FIGURE 4a
WHITE BLOOD CELL COUNT
MALE CD® RATS

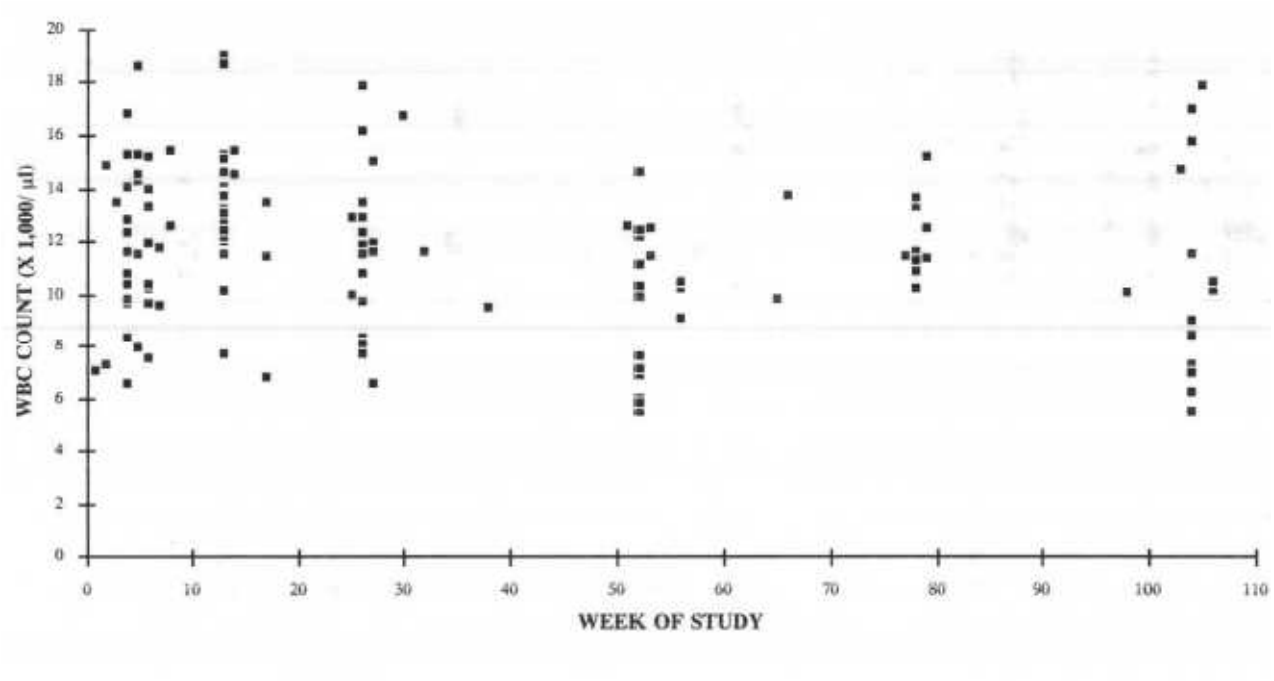


FIGURE 4b
WHITE BLOOD CELL COUNT
FEMALE CD® RATS

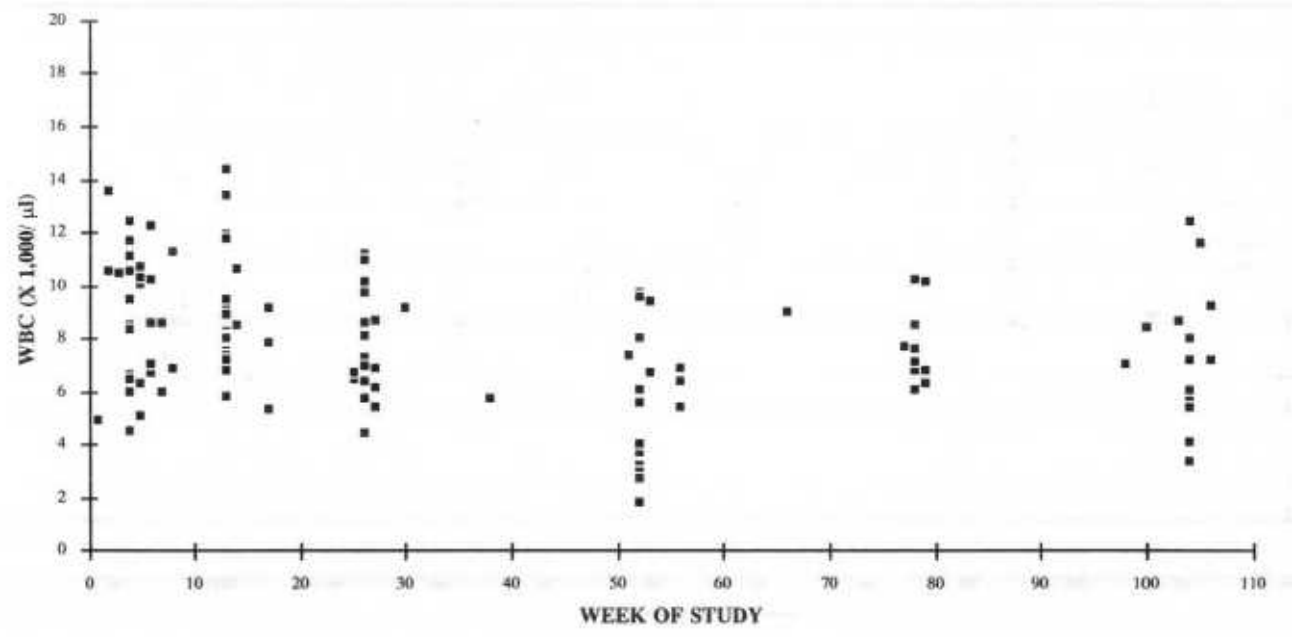


FIGURE 5a
PLATELETS
MALE CD® RATS

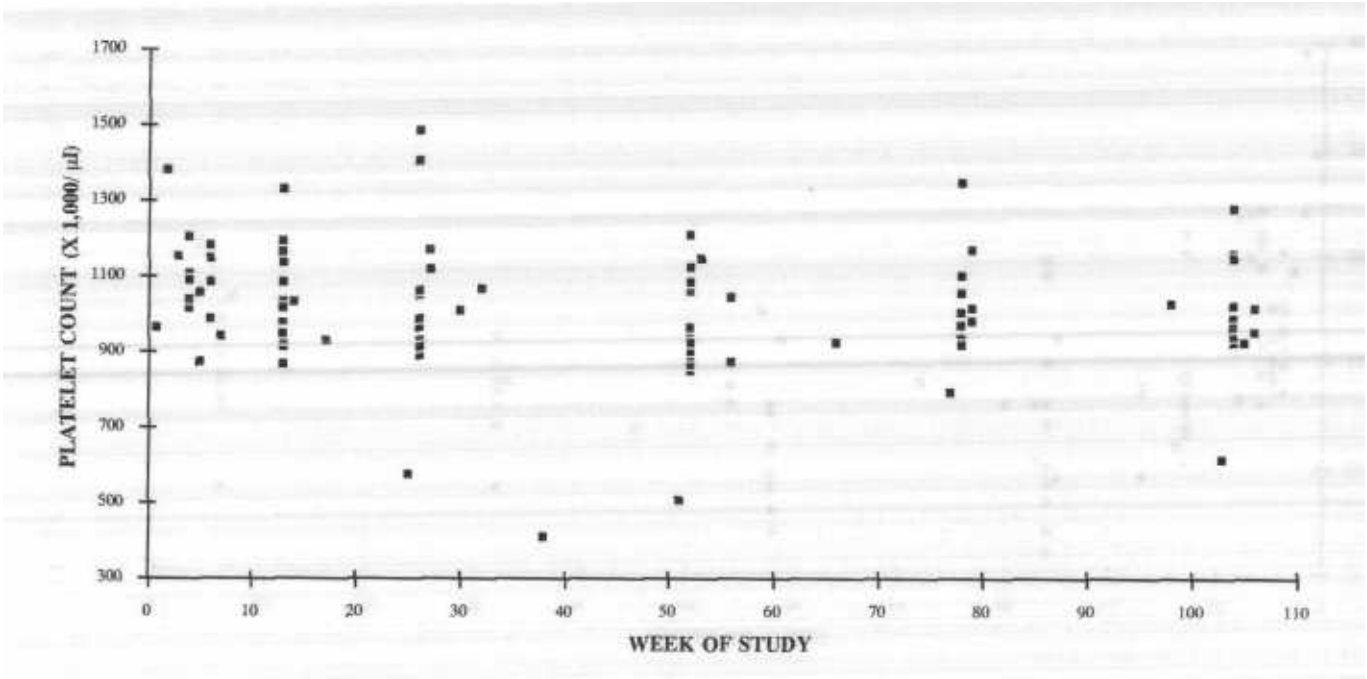


FIGURE 5b
PLATELETS
FEMALE CD® RATS

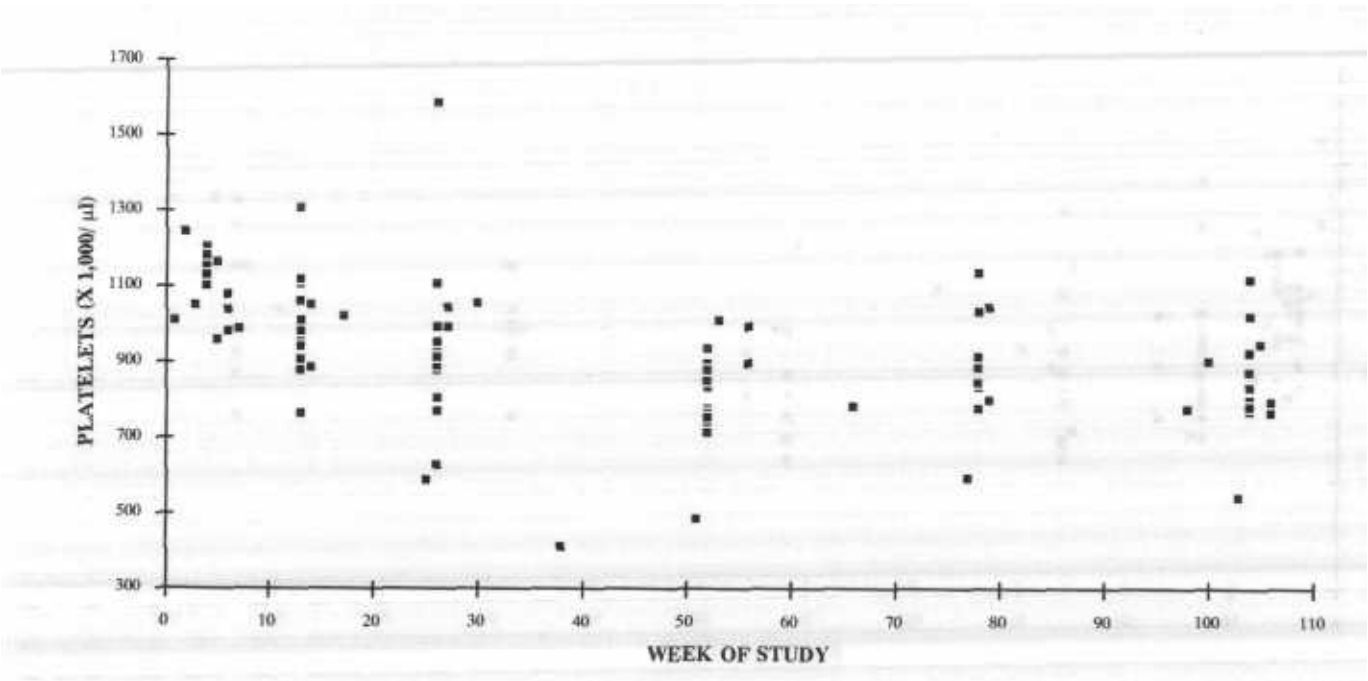


FIGURE 6a
MEAN CORPUSCULAR VOLUME (MCV)
MALE CD® RATS

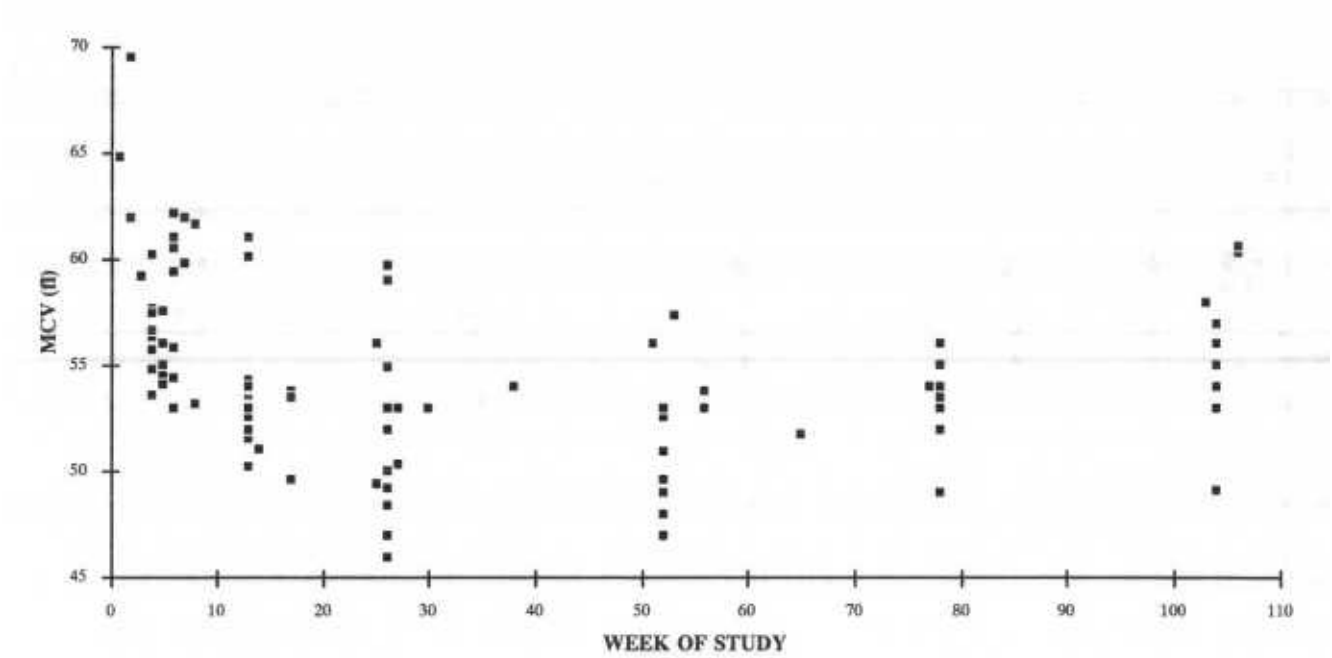


FIGURE 6b
MEAN CORPUSCULAR VOLUME (MCV)
FEMALE CD® RATS

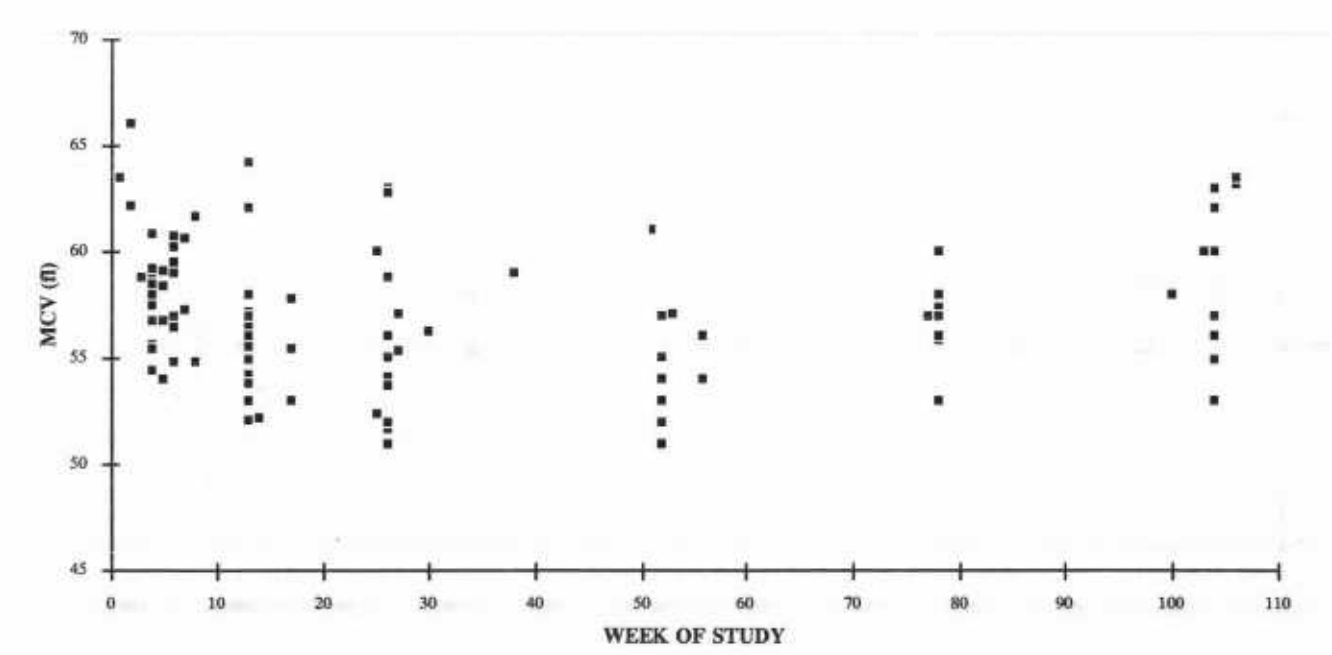


FIGURE 7a
MEAN CORPUSCULAR HEMOGLOBIN (MCH)
MALE CD® RATS

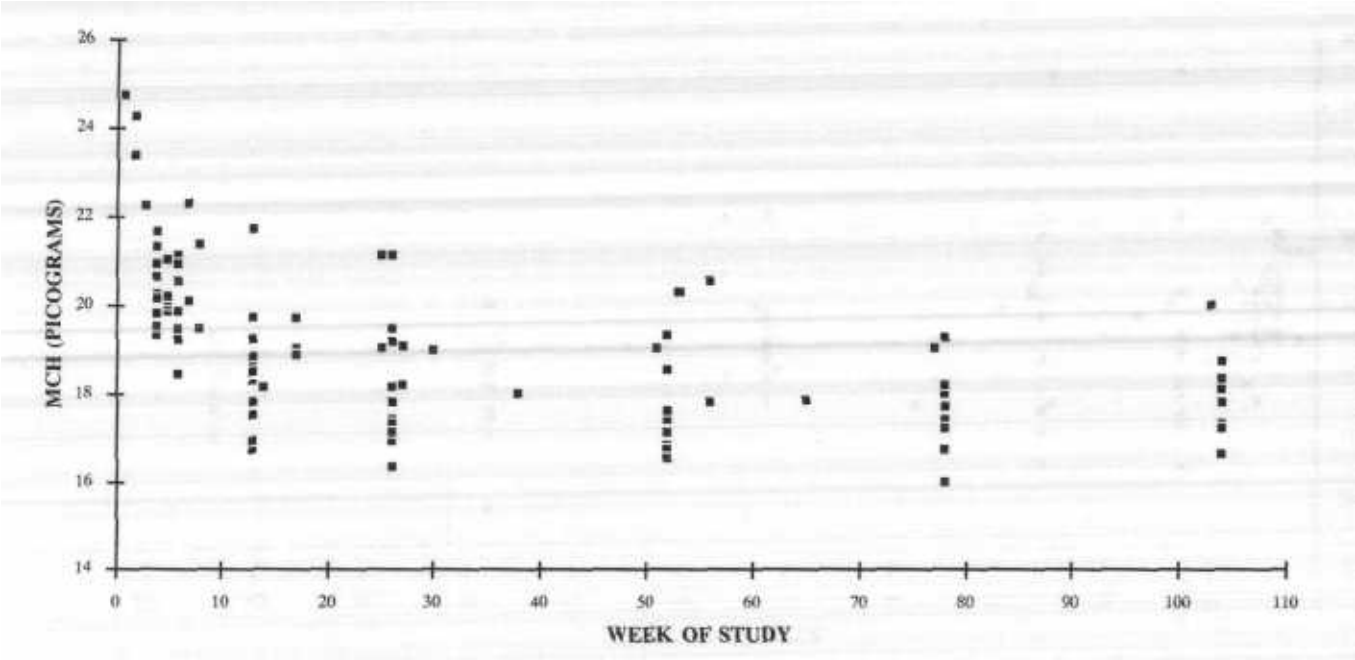


FIGURE 7b
MEAN CORPUSCULAR HEMOGLOBIN (MCH)
FEMALE CD® RATS

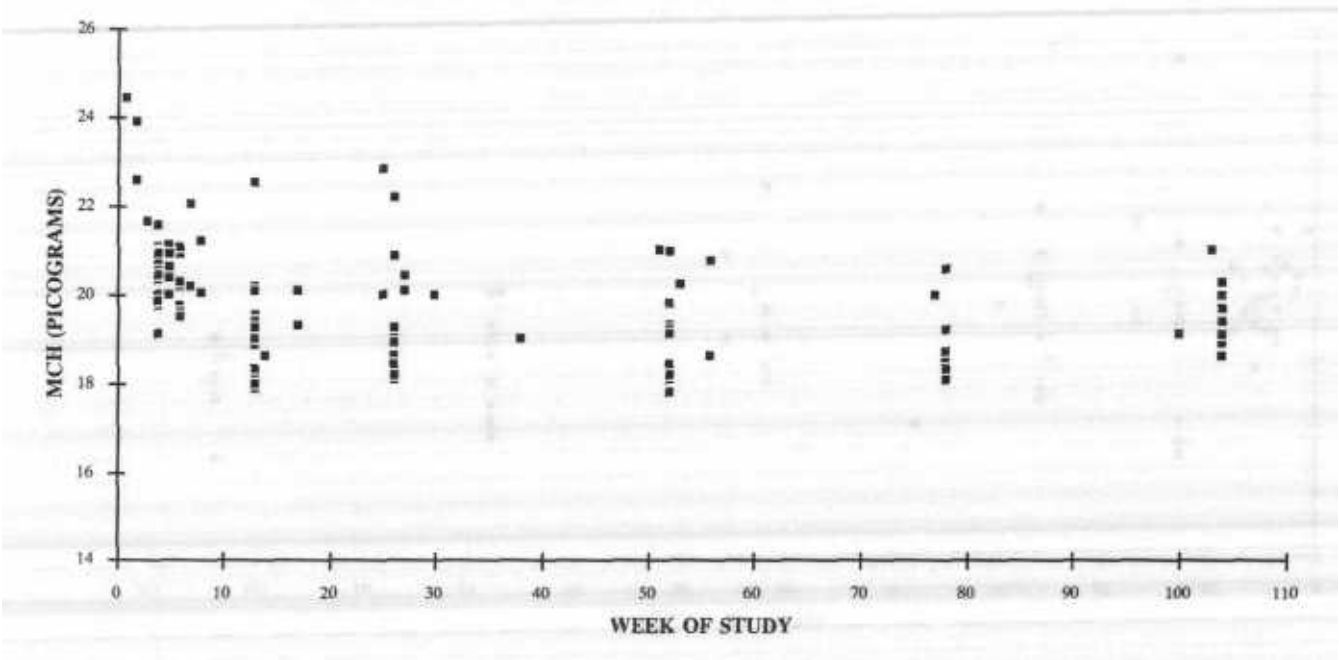


FIGURE 8a
MEAN CORPUSCULAR HEMOGLOBIN CONCENTRATION (MCHC)
MALE CD® RATS

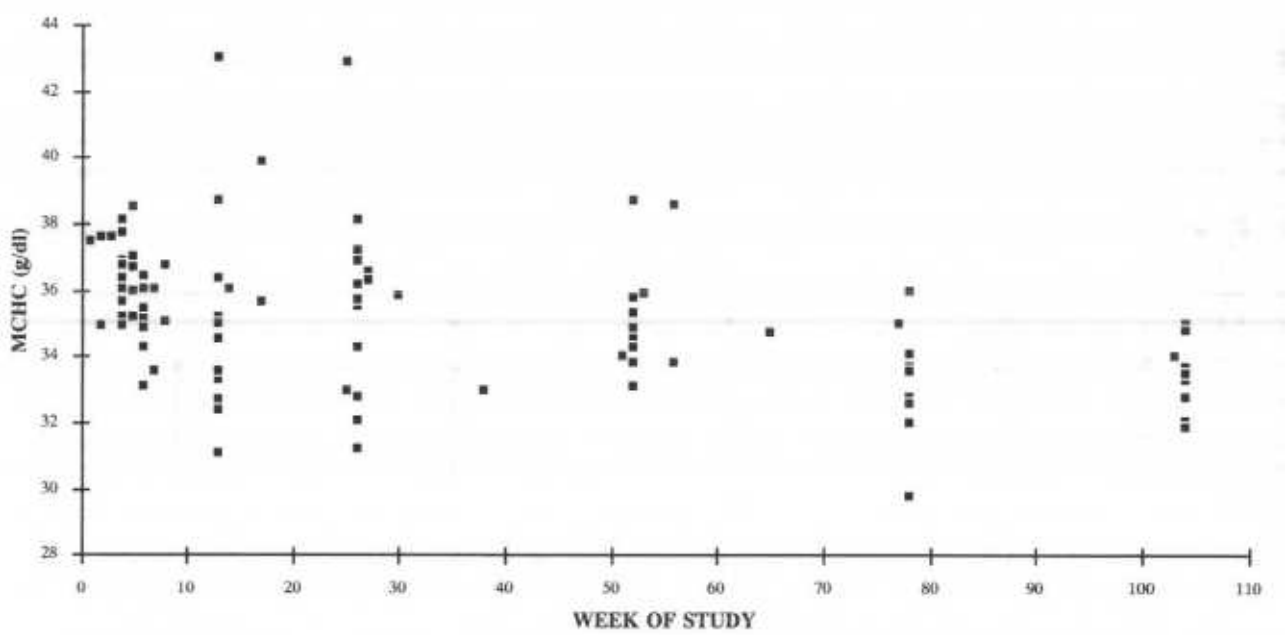


FIGURE 8b
MEAN CORPUSCULAR HEMOGLOBIN CONCENTRATION (MCHC)
FEMALE CD® RATS

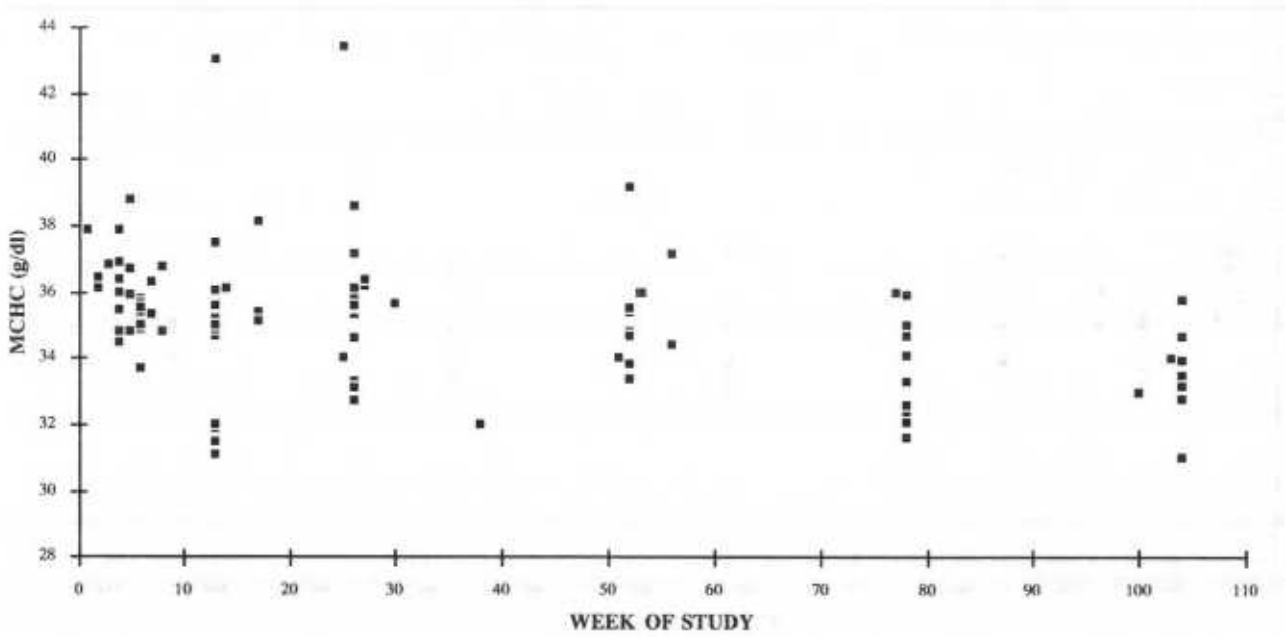


FIGURE 9a
PROTHROMBIN TIME
MALE CD® RATS

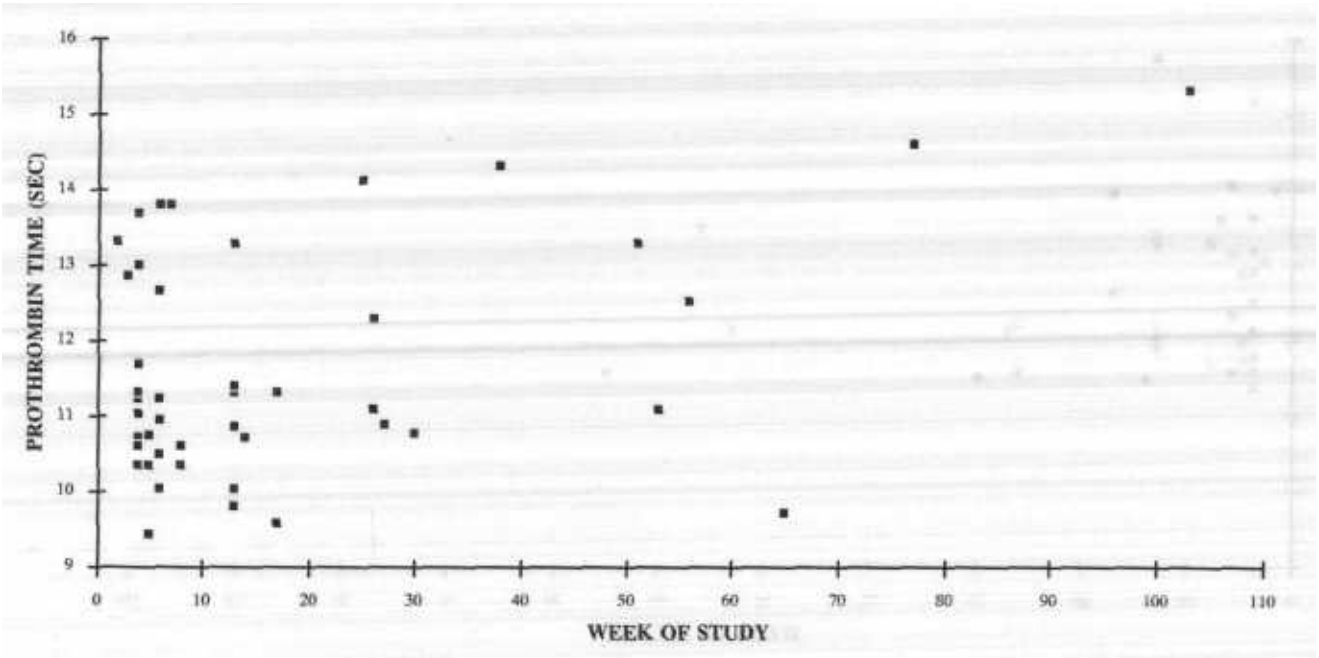


FIGURE 9b
PROTHROMBIN TIME
FEMALE CD® RATS

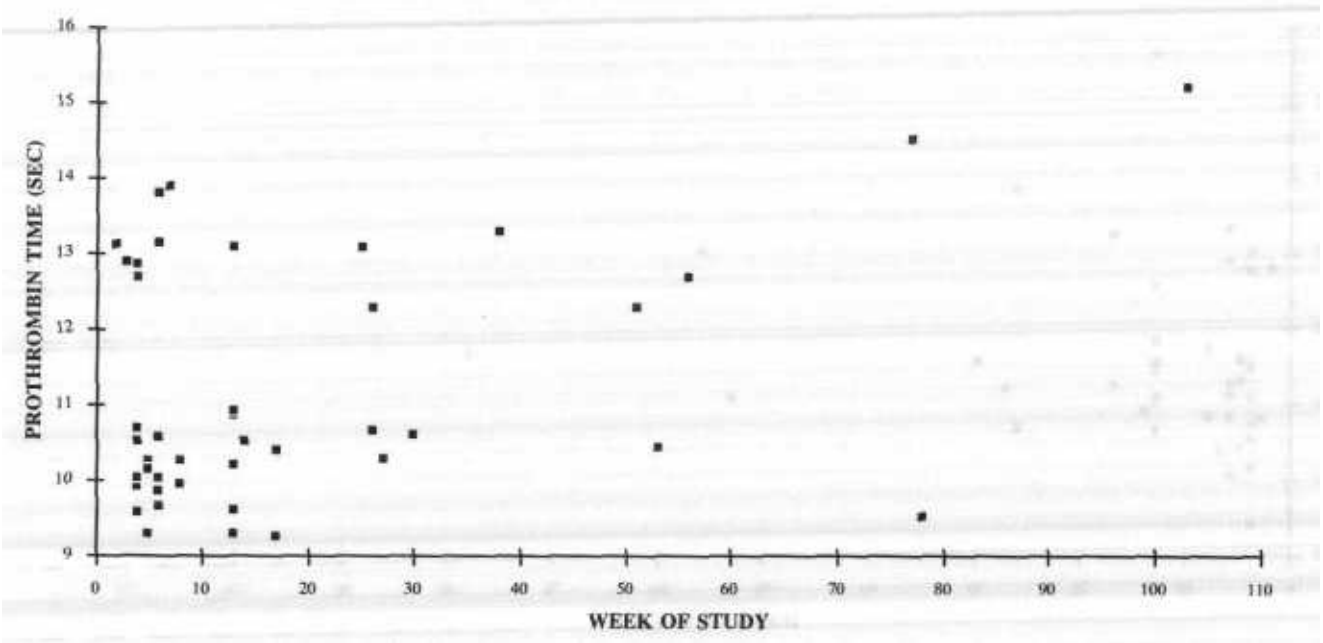


FIGURE 10a
ACTIVATED PARTIAL THROMBOPLASTIN TIME
MALE CD® RATS

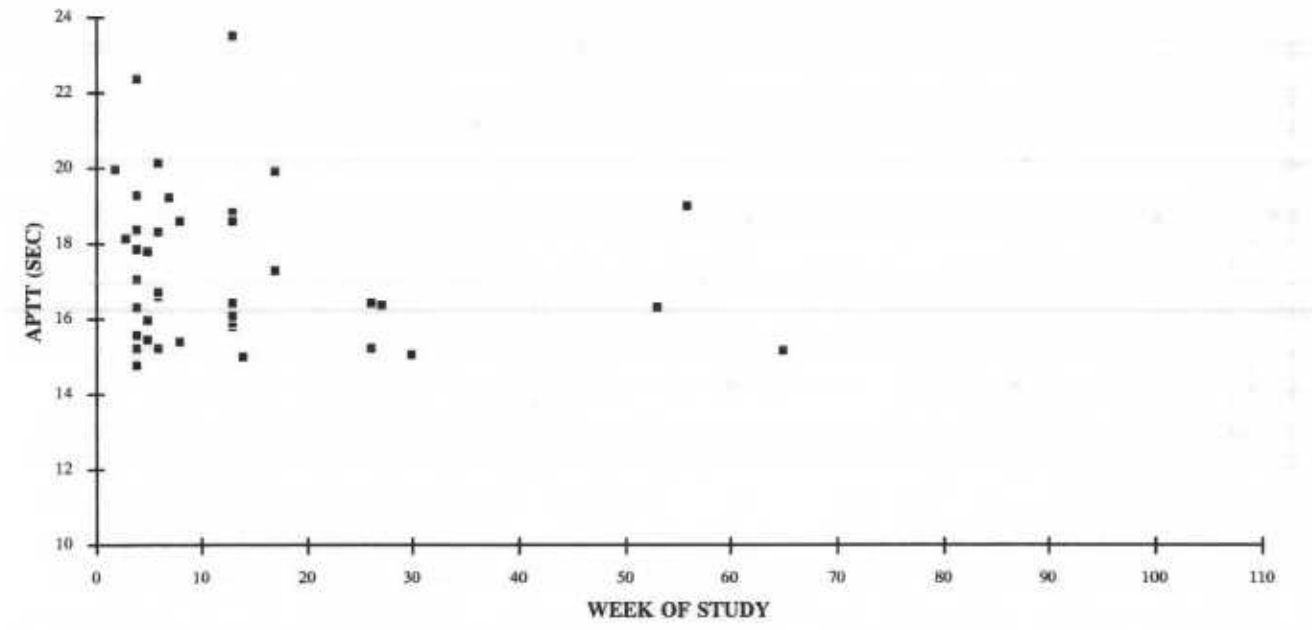


FIGURE 10b
ACTIVATED PARTIAL THROMBOPLASTIN TIME
FEMALE CD® RATS

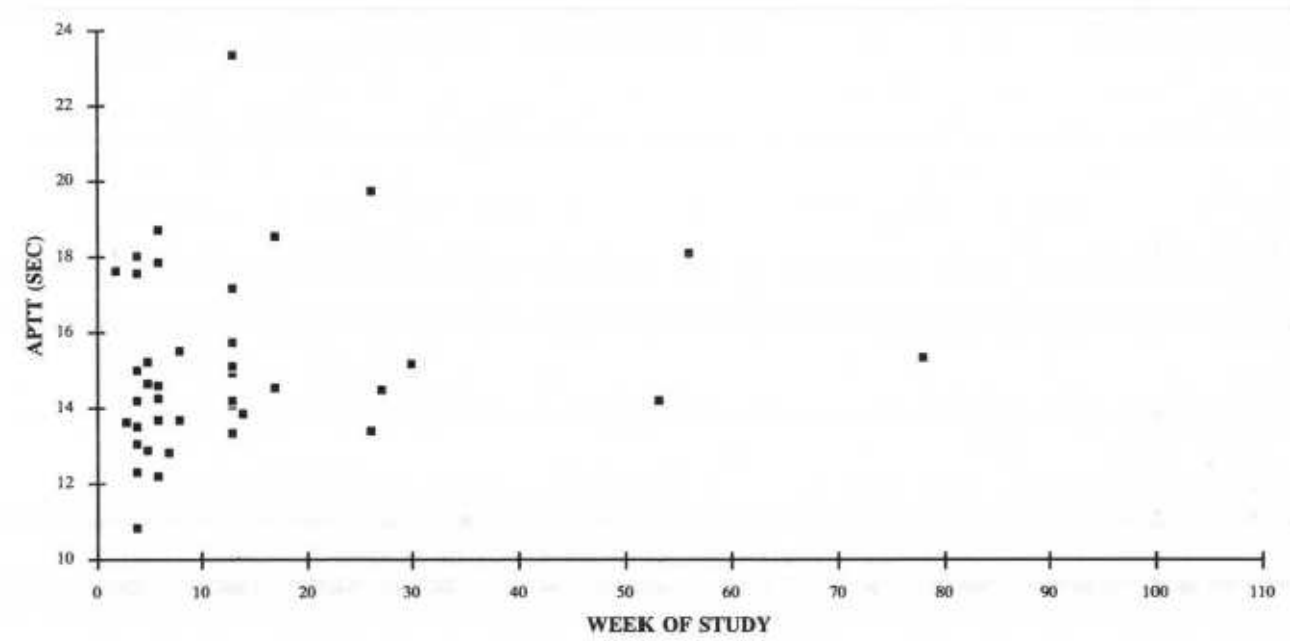


FIGURE 11a
CLOTTING TIME
MALE CD® RATS

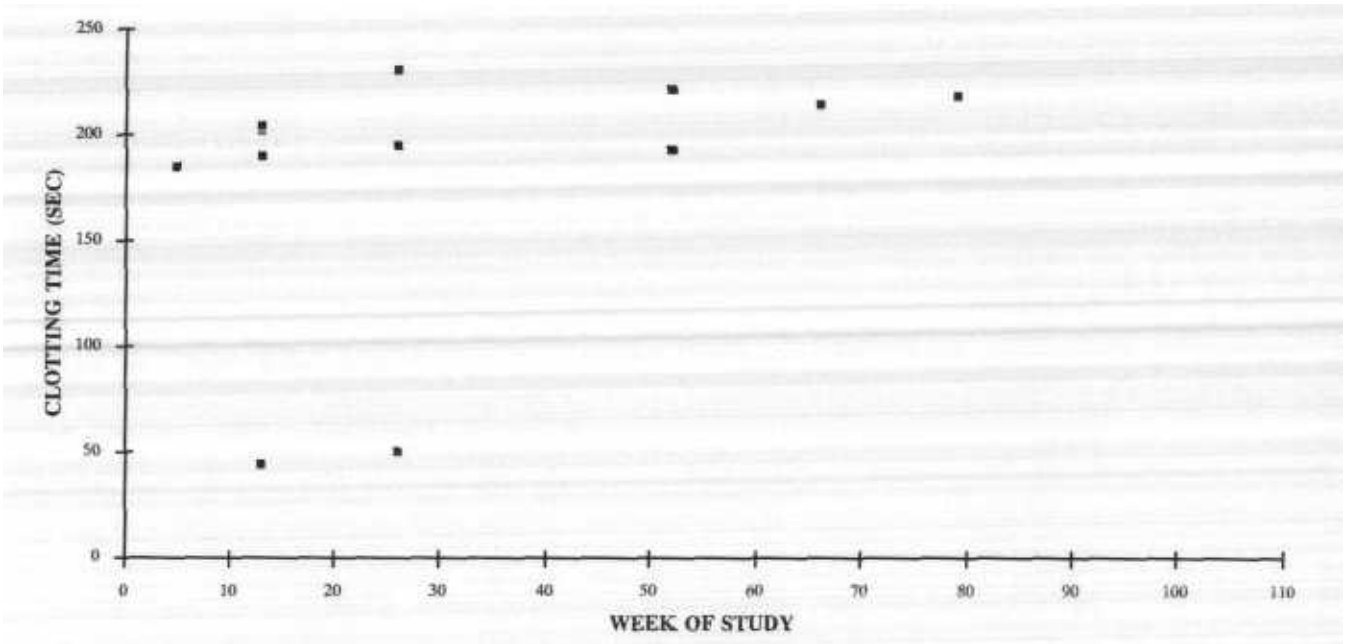
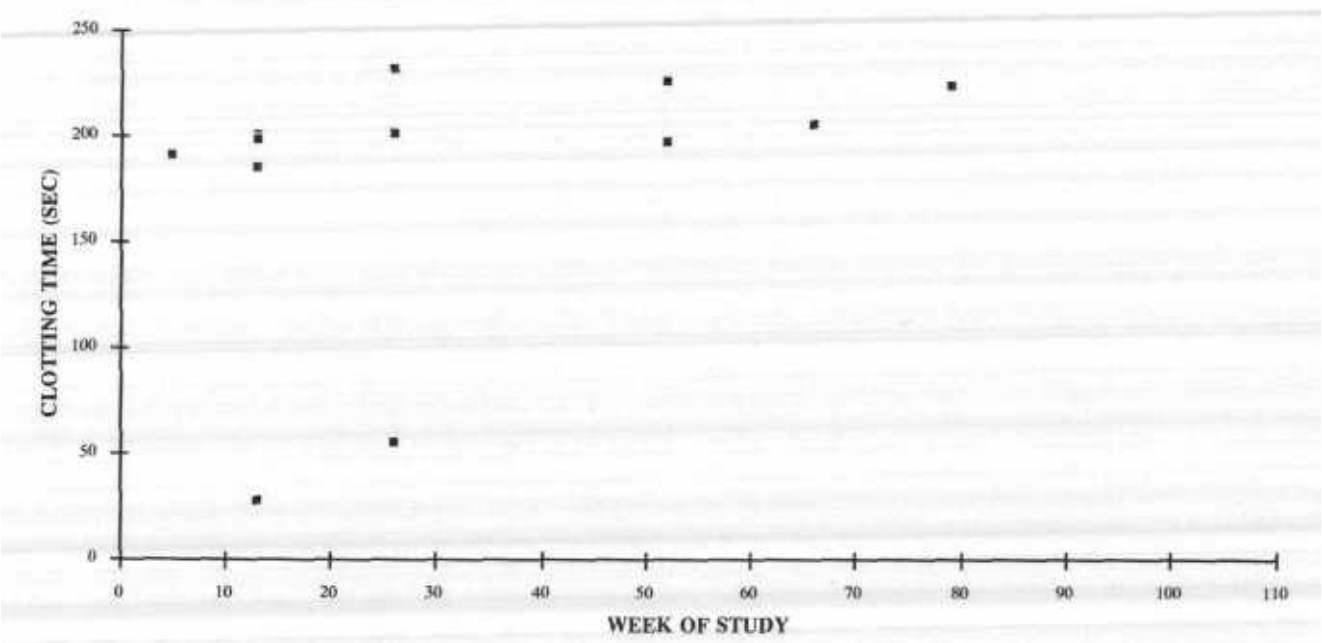


FIGURE 11b
CLOTTING TIME
FEMALE CD® RATS



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