

## 日本猿の血液の分析(4)

誌名	山口獣医学雑誌
ISSN	03889335
著者	牧田, 登之 石田, 哲也 大上, 美穂
巻/号	16号
掲載ページ	p. 101-112
発行年月	1989年11月

## BLOOD ANALYSIS OF NINE TROOPS OF JAPANESE MONKEY

Takashi MAKITA, Tetsuya ISHIDA, Miho OHOUÉ, Takao OHOMOTO  
Tadatoshi TANIGUCHI, Reiko KODAKA, Masafumi NIINA, Atsushi INOUE  
Satoshi KAGABU and Koichi MANBA

*Department of Veterinary Anatomy, Faculty of Agriculture, Yamaguchi University, 1677-1,  
Yoshida, Yamaguchi City, 753 Japan*

[ Received for publication : October 20, 1989 ]

Further to previous accumulative data of blood analysis of Japanese monkeys,<sup>1)</sup> blood samples from a total of 9 troops of Japanese monkey for anatomical record were analysed. The identification number of each specimen in each table corresponds to that of data on the body and organ weight.<sup>2)</sup>

### MATERIALS AND METHODS

From 1986 to 1988, 9 troops of Japanese monkeys have been obtained from Okayama ( Takahashi city ), Hiroshima, Ohoita ( Takasaki Zoo ) and Shimane ( Hikimi-town ). Blood samples from most of members of those troops were analysed but some monkeys were not used for this analysis because they were perfused with buffered glutaraldehyde, a chemical fixative for electron microscopy. Due to coagulation of some blood samples, not all samples were analysed for counting of blood cells. The number of items of measurement was not always consistent to Table 1 to 9 but their major indices were recorded for all specimen examined. The sex and body weight of each monkey were included in the record of body and organ weights.<sup>2)</sup>

### RESULTS AND DISCUSSION

- Table 1 Blood analysis of Japanese monkeys of Takahashi troop. ( Dec. 10, 1986 )
- Table 2 Blood analysis of Japanese monkeys of Takahashi troop. ( Feb. 2, 1987 )
- Table 3 Blood analysis of Japanese monkeys of Ohoita troop. ( June 28, 1987 )
- Table 4 Blood analysis of Japanese monkeys of Takahashi troop. ( July 23, 1987 )
- Table 5 Blood analysis of Japanese monkeys of Hikimi troop. ( March 1, 1988 )
- Table 6 Blood analysis of Japanese monkeys of Matsuyama troop. ( March 5, 1988 )
- Table 7 Blood analysis of Japanese monkeys of Yoshikawa troop. ( April 16, 1988 )
- Table 8 Blood analysis of Japanese monkeys of Takahashi troop. ( May 24, 1988 )
- Table 9 Blood analysis of Japanese monkeys of Yoshikawa troop. ( Oct. 26, 1988 )

The unit and normal value of each item for human blood are attached to Table I.<sup>3)4)5)</sup> Some figures of measurement were unusual but they were not eliminated from the table.

## ACKNOWLEDEMENTS

Cooperation of all members of this laboratory was essential for this survey. We also appreciate kind offer of monkeys by people in Takahashi city, Hikimi town, and other areas in Hiroshima and Ohoita.

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## 日本猿の血液の分析 IV

牧田登之・石田哲也・大上美穂・大元隆夫・谷口只敏  
 小高礼子・新名雅夫・井上敦嗣・利部 聰・萬場光一  
 ( 山口大学農学部獣医学科家畜解剖学教室 )

[ 受付 : 1989年10月20日 ]

日本猿の血液性状については、既報の文献もあるが、生化学的分析結果については、比較的新しい成書2冊が断片的に触れているにすぎない。それで当研究室では解剖のために日本猿を入手するたびに採血し、事情の許す限り多くの項目の測定記録を残している。前三報につづいて、本報告は、大分、愛媛、島根、広島、岡山の各地から入手した合計9群の日本猿の血液の分析記録である。参考までにヒトの正常値を付記した。検査項目は各群によって一致しないものもあるがおおむね前報通りとした。血液が凝固して測定不能となったもの、サンプル量が過少で測定できなかった場合を除き、全記録をとどめた。また一部は、GOTのアイソザイムや、LDHのサブユニットまでも測定したが、これを全試料について行うまでにはいたらなかった。

Table 1 Blood Analysis of Japanese Monkeys of Takahashi Troop

No.	1	2	3	4	5	6	( Uldt and human normal valne )
TP	8.0	6.9	8.2	6.8	6.2	6.8	6.5~8.2 g/dl
A/G	0.78	0.68	0.64	0.94	0.59	1.00	1.3~2.0
A/G	1.47	0.94	0.98	1.61	0.88	1.82	1.38~2.43
ALB	59.5	48.5	49.6	61.7	46.8	64.6	58.9~71.8 %
$\alpha_1$	1.9	2.3	1.8	2.0	2.1	1.8	2.0~3.9 %
$\alpha_2$	7.5	11.7	11.3	10.4	14.2	10.6	6.3~10.6 %
$\beta$	10.0	13.2	10.9	11.7	13.0	9.2	6.8~10.6 %
$\gamma$	21.1	24.3	26.4	14.2	23.9	13.8	8.9~20.3 %
Meulen	2	2	2	2	2	2	3~8
T-Bii	0.2	0.2	0.2	0.2	0.2	0.2	0.2~1.0mg/dl
ZTT	1.6	1.2	2.1	0.5	1.8	0.7	2.3~12.0 U
GOT	98	278	141	40	50	23	8~40 U
GPT	91	350	53	26	39	31	5~35 U
ALP	4.9	11.3	7.8	44.2	7.2	66.4	74~223IU/l Adult
LDH	762	1824	1312	717	1100	485	210~405 U
CH·E	4080	3090	3960	4710	3010	3660	1900~3800 IU
$\gamma$ -GTP	15	18	24	28	13	33	0~40 IU
LAP	7	8	8	8	8	8	10~30 IU
LDH 1	16.24	16.63	15.57	20.75	21.81	16.03	
2	29.05	28.99	24.89	30.82	28.79	28.00	
3	27.30	23.13	23.86	24.59	2.31	27.84	
4	10.39	7.85	10.45	12.72	8.91	18.22	
5	17.08	23.39	25.23	11.12	17.18	9.91	
AMY	742	807	340	887		469	65~235 U
T-cho	55	45	60	72	99	85	130~250 mg/dl
WBC	10100	24800	17100	14300	8000	7600	3500~9700/mm <sup>3</sup>
RBC	595	576	561	565	452	552	♂ 438~577 × 10 <sup>3</sup> /mm <sup>3</sup> ♀ 376~516 × 10 <sup>3</sup> /mm <sup>3</sup>
$\beta$ -Lp	84	68	59	127	300	107	200~500 mg/dl
T-G	57	35	44	26	173	28	40~170 mg/dl
T-Li	255	227	253	263	406	266	350~800 mg/dl
P-Li	137	12	149	154	102	172	150~250 mg/dl
UA	0.4	0.2	0.3	0.2	0.4	0.2	♂ 365~769 ♀ 2.6~6.0 mg/dl
BUN	24.9	41.2	16.4	32.8	24.0	23.3	8~20 mg/dl
CREA	1.7	1.2	1.7	0.9	1.3	0.9	0.7~1.5 mg/dl
Na	155	160	156	157	145	156	135~145mEq/l
K	3.5	4.1	4.3	3.7	3.2	3.3	3.5~5.0mEq/l
Cl	111	110	111	110	106	112	98~108mEq/l
Ca	4.7	4.0	4.7	4.5	4.0	4.4	4.1~5.0mEq/l
LIT	110	3	7	27	3	3	
BS	115	71	139	117	101	92	
CRP	(4+)	(5+)	(6+)	(2+)	(1+)	(-)	
RA	(-)	(-)	(-)	(-)	(-)	(-)	(-)
ASLO	40	80	40	80	40	40	Adult. below 160 Tood.

(\* 1986. 12.10 )

Table II. Blood Analysis of Japanese Monkeys of Takahashi Troop

No.	1	2	3	4	5	6
TP	7.3	7.0	6.8	6.8	7.5	8.1
A/G	0.74	0.89	0.84	0.89	0.92	0.56
A/G	1.23	1.56	1.41	1.64	1.39	0.94
ALB	55.1	61.0	58.5	62.1	58.2	48.4
$\alpha_1$	1.0	0.6	1.0	0.5	0.8	0.7
$\alpha_2$	3.1	3.0	3.1	3.0	3.5	2.8
$\beta$	3.8	4.8	5.8	5.1	4.8	5.1
$\gamma$	37.0	30.6	31.6	29.3	32.7	43.0
Meulen	2	2	2	2	2	2
T-Bii	0.2	0.1	0.1	0.2	0.1	0.2
ZTT	1.6	0.7	0.8	2.0	0.5	1.6
GOT	52	29	47	24	33	28
GPT	30	19	26	21	16	15
ALP	10.3	22.3	39.9	12.1	9.2	28.2
LDH	498	569	499	499	371	338
CH•E	2220	2910	2420	2040	2750	2790
$\gamma$ -GTP	41	53	84	44	44	44
LAP	11	28	56	15	11	15
LDH 1	36.65	20.01	33.64	35.36	37.52	32.96
2	30.96	18.33	26.31	24.45	25.71	31.28
3	19.34	20.04	20.49	20.79	20.82	22.43
4	7.84	17.89	8.94	11.68	8.56	7.25
5	5.20	23.72	10.62	7.70	7.38	6.07
AMY	1540	411	496	395	462	634
T-cho	90	103	104	76	138	130
LIP	48	59	62	27	55	168
BS	93	69	82	70	94	74
$\beta$ -Lp	166	149	147	99	211	237
T-G	177	100	74	55	63	130
T-Li	437	392	370	328	446	476
P-Li	156	198	171	161	202	204
UA	0.7	0.3	0.3	0.3	0.3	0.4
BUN	15.8	7.6	9.2	6.4	13.7	8.8
CREA	0.6	0.6	0.5	0.6	0.7	0.4
Na	150	143	146	146	149	145
K	4.7	5.0	4.7	4.7	4.3	4.4
Cl	112	104	106	109	106	107
Ca	4.2	4.5	4.5	4.3	4.4	4.2
WBC	6600	8600	6600	6700	10200	7100
RBC	511	524	632	485	519	547
CRP	(-)	(-)	(-)	(-)	(-)	(-)
RA	(-)	(-)	(-)	(-)	(-)	(-)
ASLO	160	80	40	80	80	20

(\* 1987. 2. 2)

Table III Blood Analysis of Japanese Monkeys of Takasaki Troop

No.	1	2	3	4	5	6	7	human normal value
TP	7.6	7.9	8.7	7.4	9.0	7.7		
A/G	0.73	0.65	0.53	0.54	0.73	0.61	0.83	
A/G	1.06	0.87	0.75	0.66	1.02	0.90	1.18	
ALB	51.5	46.6	42.8	39.6	50.4	47.4	54.1	
$\alpha_1$	1.0	1.1	1.2	1.3	1.0	1.3	1.2	
$\alpha_2$	2.5	2.3	1.9	3.3	2.2	2.3	2.3	
$\beta$	6.4	5.6	4.9	8.2	5.5	4.8	4.3	
$\gamma$	38.6	44.4	49.2	47.6	40.9	44.2	38.1	
Meulen	2	2	2	2	2	3	2	
T-Bii	0.1	0.2	0.2	0.2	0.2	0.3	0.2	
ZTT	0.9	0.6	2.1	0.6	0.7	3.1	0.8	
GOT	39	23	37	16	46	130	29	
GOT isosyme								
Total	39	23	37	16				
S-GOT	35	22	33	10				
M-GOT	4	1	4	6				
GPT	16	13	17	13	29	12	42	
ALP	731	622	404	603	497	1423	374	
LDH	948	549	898	517	762	82	550	
CH•E	2177	2277	1506	1912	2031	2209	1949	
$\gamma$ -GTP	93	100	76	61	100	90	88	
LAP	18	29	19	29	40	11	30	
ACP	26.7	12.1	7.3	9.0	16.1	8.7	26.9	
AMY	488	679	536	302	818	603	450	
Cortisol	17.7	28.6	47.3	37.3				
T-cho	122	106	110	91	113	116	125	
WBC	12200	9700	15400	13300	acboo	26900	9100	
RBC	548	525	546	545	569	562	509	
Hb	13.4	12.5	13.1	12.5	13.1	14.3	12.2	♂ 13.6~18.3 ♀ 11.2~15.2 g/dl
Ht	42.2	39.7	42.0	40.1	41.4	46.0	39.3	♂ 40.4~51.9% ♀ 34.3~45.2%
MCV	77	76	77	74	73	82	77	♂ 83~101 ♀ 80~101 $\mu^3$
MCH	24.5	23.8	24.0	22.9	23.0	25.4	24.0	♂ 28.2~34.7 ♀ 26.4~34.3 $\mu\mu\text{g}$
MCHC	31.8	31.5	31.2	31.2	31.6	31.1	31.0	♂ 31.8~36.4% ♀ 31.3~36.1%
Platelet	35.1	43.7	40.9	28.3	42.7	42.7	47.4	14.0~37.9万/mm <sup>3</sup>
$\beta$ -Lp	230	279	250	173	299	308	214	
T-G	104	101	96	96	103	159	52	
T-Li	448	392	331	299	361	513	323	
P-Li	188	145	155	171	151	186	180	
UA	0.3	0.2	0.2	0.2	0.3	1.1	0.2	
BUN	12.3	10.3	14.0	22.4	20.0	18.1	16.1	
CREA	0.7	0.5	0.7	0.5	0.7	1.2	0.5	
Na	139	139	137	139	140	145	143	
K	6.8	7.7	9.5	6.9	7.1	7.4	7.9	
CI	101	102	103	101	104	107	109	
Ca	4.8	4.3	4.4	4.2	4.5	5.4	4.6	
CRP	(-)	(-)	(-)	(3+)	(-)	(-)	(-)	
RA	(-)	(-)	(-)	(-)	(-)	(-)	(-)	
ASLO	40	40	40	20	160	40	160	

(\*<sub>1</sub> 1987. 6. 28. Ohoita, TAKASAKI) (\*<sub>2</sub> not measured)

Table IV Blood Analysis of Japanese Monkeys of Takahashi Troop

No.	A-1	B	C	D	E-1	F-1	G-1	I	J	K	L-1	M-1	N	O	P	Q	R
TP	6.1	8.0	6.6	7.0	5.7	5.8	6.4	5.2	7.1	6.0	5.8	7.1	7.1	5.9	6.9	6.5	7.1
A/G	1.10	1.00	2.00	0.89	2.00	0.76	1.37	0.79	1.22	0.76	0.71	1.09	1.15	1.46	0.97	0.91	0.78
A/G	1.67	1.42	2.79	1.22	2.80	0.90	1.79	0.93	1.66	0.99	0.86	1.54	1.55	1.80	1.58	1.31	1.13
ALB	62.6	58.6	73.6	54.9	73.7	47.4	64.1	48.1	72.4	49.7	46.2	60.6	60.8	64.4	61.3	56.8	53.1
$\alpha_1$	3.4	3.8	2.3	3.6	2.6	6.2	3.3	6.3	2.6	3.5	5.6	3.1	5.1	3.3	3.6	4.2	4.8
$\alpha_2$	7.2	5.9	5.3	5.2	6.3	12.8	6.2	15.8	6.3	10.8	12.9	5.8	5.7	6.8	4.8	6.3	6.3
$\beta$	16.2	11.4	9.5	11.7	6.9	14.9	12.0	12.7	12.3	14.3	13.1	9.8	13.0	14.5	10.0	12.8	11.7
$\gamma$	10.6	20.3	9.3	24.6	10.5	18.7	14.4	17.1	16.4	21.7	22.2	20.7	15.4	11.0	20.3	19.9	24.1
Meulen	4	5	3	3	5	3	3	4	4	4	4	4	3	3	2	2	2
T-Bii	0.4	0.6	0.3	0.3	0.6	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2
ZTT	0.3	0.7	0.4	1.8	0.4	0.2	0.6	0.2	0.2	0.6	0.3	1.3	0.6	0.5	1.0	0.9	0.6
GOT	71	48	31	48	39	72	47	67	37	114	56	39	29	39	31	28	62
GPT	50	20	14	48	12	99	64	44	46	308	43	69	40	28	21	47	43
ALP	455	446	671	204	1030	529	451	472	656	652	414	721	787	637	687	386	271
LDH	1426	889	877	1117	792	2171	1935	2363	1054	2379	2175	1621	1665	1072	644	843	1290
CH-E	1510	3010	3160	1350	3290	730	1670	840	1840	1490	1070	2000	1980	1960	670	2140	1820
$\gamma$ -GTP	40	31	86	40	68	46	73	16	83	42	28	65	70	32	51	19	57
LAP	15	12	14	11	13	15	12	13	16	32	9	13	16	12	12	11	12
ACP	10.6	8.5	14.9	5.7	14.2	12.0	10.3	23.7	9.0	13.0	15.0	12.0	10.0	10.2	13.9	9.2	10.4
WBC	-	6400	9000	18600	7300	12700	8900	5200	10700	12000	6000	6100	1500	15500	6700	6200	5500
RBC	-	404	428	485	444	479	415	491	435	410	320	460	520	504	455	442	
AMY	522	511	932	617	272	228	644	179	532	319	958	1011	955	611	974	344	857
Cortisol	53.0			24.6		59.5	29.7		47.2		68.0	48.1	27.2				
T-cho	89	105	104	102	173	69	64	73	114	54	75	101	136	70	71	98	93
LIP	125			110		64	58		62		51	95	65				
BS	64			72		98	73		102		108	83	139				
$\beta$ -Lp	67	256	174	218	439	160	132	172	200	107	180	213	250	81	176	163	168
T-G	23	219	38	79	199	91	89	71	97	46	75	71	59	20	88	61	89
T-Li	320	415	315	308	573	288	225	245	416	236	253	276	357	211	249	291	295
P-Li	153	195	161	145	210	155	135	202	208	156	213	145	202	138	113	139	140
UA	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
BUN	47.7	51.9	11.7	41.8	44.3	29.2	35.8	82.4	30.3	42.9	26.4	23.9	32.8	41.6	34.2	25.0	28.7
CREA	1.1	1.0	0.5	0.8	0.6	0.7	0.6	0.8	0.9	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.9
Na	148	160	145	158	143	154	150	141	153	145	140	145	152	151	141	147	153
K	5.0	4.2	4.2	4.6	4.4	5.1	4.5	4.6	3.8	6.0	4.2	4.0	4.7	4.8	4.7	4.2	4.8
Cl	108	122	107	118	106	113	113	105	112	107	101	106	111	114	104	105	111
Ca	4.5	4.8	5.1	4.4	4.3	4.1	4.7	3.9	4.5	4.1	3.9	4.3	4.7	4.4	4.5	4.0	3.9
Hb	-	10.5	11.3	12.2	12.4	12.0	12.3	11.7	13.2	11.2	10.1	8.4	12.4	12.3	12.7	12.4	11.4
Ht	-	34.5	34.9	39.3	40.9	39.7	40.3	36.7	41.9	36.1	33.0	27.4	40.0	40.2	41.9	40.3	38.6
MCV	-	85	82	81	84	89	84	88	85	83	80	86	87	77	83	8.9	87
MCH	-	26.0	26.4	25.2	25.6	27.0	25.7	28.2	26.9	25.7	24.6	26.3	27.0	23.7	25.2	27.3	25.8
MCHC	-	30.4	32.4	31.0	30.3	30.2	30.5	31.9	31.5	31.0	30.6	30.7	31.0	30.6	30.3	30.8	29.5
Plate	-																
CRP	(2+)	(+)	(-)	(-)	(-)	(-)	(2+)	(-)	(-)	(5+)	(6+)	(-)	(2+)	(2+)	(-)	(-)	(-)
RA	(-)	(-)	(-)	(-)	(-)	(-)	(1+)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(1+)	-
ASLO	20	80	20	40	40	40	20	40	20	20	40	40	20	20	20	20	80

( \* 1987. 7. 23. Okayama, TAKAHASHI )

( No. H was not measured )

Table V Blood Analysis of Japanese Monkeys of Hikimi Troop

No.	1	2	3	4	5	6	7	8	9
TP8.3	7.3	7.4	7.6	6.6	7.3	6.8	6.2	7.1	
A/G	1.61	1.09	0.80	1.38	1.00	1.81	1.34	1.95	1.73
ALB	5.3	3.8	3.3	4.4	3.3	4.7	3.9	4.1	4.5
A/G	2.09	1.27	0.98	1.61	1.26	2.04	1.68	2.06	1.96
ALB	67.6	56.0	49.5	61.7	55.7	67.1	62.7	67.3	66.2
$\alpha_1$	2.5	3.2	3.6	3.0	3.8	2.4	2.4	2.2	2.7
$\alpha_2$	4.1	6.3	6.7	5.8	4.5	5.8	5.7	6.0	6.2
$\beta$	11.3	13.3	16.8	13.1	11.5	12.0	11.5	11.5	10.8
$\gamma$	14.5	21.2	23.4	16.4	24.5	12.7	17.7	13.0	14.1
T-Bii	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
ZTT	0.9	1.0	1.7	1.8	2.0	0.8	1.1	1.6	0.9
GOT	39	21	41	43	72	33	55	82	53
GPT	24	18	22	31	21	18	73	24	20
ALP	533	217	128	458	130	429	211	317	348
LDH	650	610	1334	660	1010	623	720	892	1095
CH·E	2830	2210	1880	3030	1230	2440	1860	2390	1950
$\gamma$ -GTP	50	65	81	59	55	45	58	43	44
LAP	15	20	30	16	13	14	15	8	11
ACP	15.5	10.5	14.1	11.5	10.5	10.8	8.6	12.8	14.4
AMY	663	345	244	580	286	493	458	453	347
T-cho	118	69	54	130	41	105	92	97	90
WBC	12200	6100	9200	6200	9000	9300	10900	8000	6200
RBC	596	480	652	554	484	534	458	469	520
Hb	15.5	13.0	15.9	13.9	12.8	13.9	12.3	12.9	13.5
Ht	50.6	41.2	50.5	43.2	40.1	43.7	39.8	40.0	42.4
MCV	85	86	77	78	83	82	87	85	82
MCH	26.0	27.1	24.4	25.1	26.4	26.0	26.9	27.5	26.0
MCHC	30.6	31.6	31.5	32.2	31.9	31.8	30.9	32.3	31.8
Platlet	32.1	44.8	30.0	19.9	43.7	21.0	34.9	14.2	28.5
Urine pH	8.5	8.0	5.0	6.5		7.5	7.5	5.5	4.5
$\beta$ -Lp	171	77	179	186	137	185	140	192	139
T-G	86	36	98	59	86	67	34	48	35
LIP	118	34	47	55	22	8	28	30	8
P-Li	208	145	99	194	79	157	122	141	162
UA	0.7	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3
BUN	45.6	52.7	76.7	39.5	20.4	22.9	39.4	29.5	53.8
CREA	0.8	0.7	1.0	0.8	0.6	0.8	0.8	0.7	0.8
BS	176	72	30	41	39	69	25	22	24
CI	110	105	116	100	103	101	109	105	95
Ca	5.4	4.7	5.3	4.6	4.7	4.6	4.4	4.4	4.6
LDH 1	21.21	16.56	14.90	18.93	18.99	9.16	12.80	18.18	12.09
2	18.18	18.39	16.81	18.87	16.77	12.91	18.81	16.07	16.04
3	23.09	27.34	24.59	26.06	25.23	23.03	28.20	23.73	26.42
4	21.71	25.20	26.82	23.56	24.58	27.66	25.04	24.42	27.10
5	15.81	12.51	16.87	12.58	14.43	27.23	15.14	17.60	18.35
ASLO	80	80	160	160	80	80	80	80	40



Table VI Blood Analysis of Japanese Monkeys of Matsuyama Troop

No.	1	2	3	4	5	6	7	8	9
TP	8.6	7.3	7.4	7.6	6.6	7.3	6.8	6.2	7.1
A/G	1.61	1.09	0.80	1.38	1.00	1.81	1.34	1.95	1.73
ALB	5.3	3.8	3.3	4.4	3.3	4.7	3.9	4.1	4.5
A/G	2.09	1.27	0.98	1.61	1.26	2.04	1.68	2.06	1.96
ALB67.6	56.0	49.5	61.7	55.7	67.1	62.7	67.3	66.2	
$\alpha_1$	2.5	3.2	3.6	3.0	3.8	2.4	2.4	2.2	2.7
$\alpha_2$	4.1	6.3	6.7	5.8	4.5	5.8	5.7	6.0	6.2
$\beta$	11.3	13.3	16.8	13.1	11.5	12.0	11.5	11.5	10.8
$\gamma$	14.5	21.2	23.4	16.4	24.5	12.7	17.7	13.0	14.1
T-Bii	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
ZTT	0.9	1.0	1.7	1.8	2.0	0.8	1.1	1.6	0.9
GOT	39	21	41	43	72	33	55	82	53
GPT	24	18	22	31	21	18	73	24	20
ALP	533	217	128	458	130	429	211	317	348
LDH	650	610	1334	660	1010	623	720	892	1095
CH-E	2830	2210	1880	3030	1230	2440	1860	2390	1950
$\gamma$ -GTP	50	65	81	59	55	45	58	43	44
LAP	15	20	30	16	13	14	15	8	11
ACP	15.5	10.5	14.1	11.5	10.5	10.8	8.6	12.8	14.4
AMY	663	345	244	580	286	493	458	453	347
T-cho	118	69	54	130	41	105	92	97	90
BS	176	72	30	41	39	69	25	22	24
$\beta$ -Lp	171	77	179	186	137	185	140	192	139
T-G	86	36	98	59	86	67	34	48	35
P-Li	208	145	99	194	79	157	122	141	162
UA	0.7	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3
BUN	45.6	52.7	76.7	39.5	20.4	22.9	39.4	29.5	53.8
CREA	0.8	0.7	1.0	0.8	0.6	0.8	0.8	0.7	0.8
CI	110	105	116	100	103	101	109	105	95
Ca	5.4	4.7	5.3	4.6	4.7	4.6	4.4	4.4	4.6
LDH 1	21.21	16.51	14.90	18.93	18.99	9.16	12.80	18.18	12.09
2	18.18	18.39	16.81	18.87	16.77	12.91	18.81	16.07	16.04
3	23.09	27.34	24.59	26.06	25.23	23.03	28.20	23.73	26.42
4	21.71	25.20	26.82	23.56	24.58	27.66	25.04	24.42	27.10
5	15.81	12.51	16.87	12.58	14.43	27.23	15.14	17.60	18.35
ASLO	80	80	160	160	80	80	80	80	40

(\* 1988. 3. 5. Ehime, MATSUYAMA )

( 9 out of 60 captured at Mishocho, Minamiuwagun )

Table VII Blood Analysis of Japanese Monkeys of Hiroshima Troop

No.	1	3	4	5	6	7	8	9	11	12	13	14	15	
TP	7.5	7.0	8.3	7.6	7.9	7.9	6.8	6.1	7.2	8.5	7.4	8.1	7.5	
A/G	0.70	0.79	0.77	1.45	0.80	1.55	0.70	0.91	1.25	0.85	0.90	0.80	0.63	
ALB	3.1	3.1	3.6	4.5	3.5	4.8	2.8	2.9	4.0	3.9	3.5	3.6	2.9	
LDH	1	33.46	24.22	13.61	26.50	23.81	28.84	16.39	27.56	18.86	31.21	22.06	22.29	24.23
	2	28.80	27.99	26.16	22.06	25.20	23.83	23.72	22.51	19.92	29.19	23.02	23.23	22.27
	3	24.25	23.06	28.05	20.81	26.76	21.23	24.86	20.66	27.57	24.96	21.06	21.08	23.11
	4	10.78	17.34	21.46	15.63	14.53	13.10	16.67	13.50	23.28	8.92	14.39	14.56	20.21
	5	2.70	7.44	10.71	14.99	9.69	12.99	18.34	15.77	10.37	5.72	19.18	18.84	10.18
T-Bii	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	
ZTT	5.7	1.8	1.7	1.5	8.9	3.6	1.9	4.6	1.6	3.2	9.3	2.2	4.8	
GOT	37	15	25	25	34	30	46	63	48	44	35	35	36	
GPT	12	7	9	24	26	31	26	38	15	16	34	23	19	
ALP	356	213	227	696	419	441	233	373	463	233	410	422	275	
LDH	522	467	682	458	515	474	866	688	930	1359	443	686	737	
CH·E	670	1550	1650	3430	2980	2050	1420	1820	3460	3580	1380	3240	1940	
$\gamma$ -GTP	104	21	26	56	38	63	23	63	63	55	41	27	35	
LAP	65	28	23	10	28	14	35	32	11	30	37	17	35	
ACP	9.4	8.6	8.7	9.7	8.1	6.6	10.5	10.1	8.8	7.9	6.7	16.4	16.5	
WBC	14100	11600	10000	14400	19800	8300	12400	18000	7900	11800	16000	27000	9900	
RBC	508	403	514	529	585	480	463	461	514	581	522	586	482	
Hb	12.1	10.7	13.9	13.4	15.3	12.9	11.9	11.0	12.1	16.5	13.1	15.1	12.7	
Ht	39.6	35.6	44.7	42.8	49.0	39.8	37.4	36.4	38.3	50.8	42.4	50.5	40.7	
MCV	78	88	87	81	84	83	81	79	75	87	81	86	84	
MCH	23.8	26.6	27.0	25.3	26.2	26.9	25.7	23.9	23.5	28.4	25.1	25.8	26.3	
MCHC	30.6	30.1	31.1	31.3	31.2	32.4	31.8	30.2	31.6	32.5	30.9	29.9	31.2	
Platelet	32.2	26.2	45.0	32.5	30.3	32.8	30.1	36.9	30.4	49.8	38.5	65.7	28.1	
AMY	445	230	230	280	410	266	146	273	455	617	316	1332	194	
T-cho	251	151	100	178	119	152	91	107	121	38	109	109	95	
$\beta$ -Lp	453	490	368	232	219	176	306	134	125	84	149	354	266	
T-G	67	170	276	43	123	42	214	31	25	53	75	193	123	
LIP	159	47	6	34	25	29	4	72	31	20	21	477	12	
P-Li	230	172	173	239	261	208	160	146	173	86	232	197	139	
UA	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.4	0.2	0.3	0.4	
BUN	24.9	14.8	50.9	39.6	36.2	41.9	20.0	35.5	26.6	62.9	37.3	190.2	21.9	
CREA	0.8	0.5	0.7	0.8	0.8	0.8	0.7	0.6	1.0	1.1	1.0	1.9	0.7	
BS	54	22	68	41	54	101	76	59	45	67	69	73	58	
Na	137	138	143	144	144	147	139	145	138	144	141	165	135	
K	12.1	8.9	10.3	10.1	11.8	10.6	8.5	8.1	9.6	10.1	7.8	13.0	9.7	
Cl	105	102	109	106	108	109	103	107	103	103	102	129	100	
Ca	4.3	3.9	4.3	4.8	4.7	4.5	4.1	4.2	4.6	4.8	4.3	4.9	4.1	
ASLO	160	40	320	80	20	80	40	80	160	160	20	160	160	

(\* No. 2, No. 10 were not measured.)

(\* 1988. 4. 16. Hiroshima )

Table VIII Blood Analysis of Japanese Monkeys of Takahashi Troop

No.	1	2	3	4	5	6	7	8	9	10	11	12
TP	6.1	6.0	6.8	6.7	6.7	7.0	6.7	7.0	6.5	6.4	7.2	7.3
A/G	0.74	0.67	1.13	1.39	1.23	1.50	1.39	1.00	0.71	1.13	1.25	0.97
ALB	2.6	2.4	3.6	3.9	3.7	4.2	3.9	3.5	2.7	3.4	4.0	3.6
LCH 1	16.66	18.19	12.43	16.42	15.41	20.44	15.59	11.71	14.15	19.45	16.42	26.07
2	17.87	16.32	12.12	17.11	17.12	21.98	20.50	15.11	16.62	16.39	16.26	16.57
3	24.66	24.28	24.13	26.90	24.75	27.96	29.10	26.92	24.00	24.17	27.09	22.36
4	22.27	22.99	27.92	24.98	24.99	21.10	24.04	27.70	26.98	23.58	24.84	21.51
5	18.53	18.23	23.40	14.59	17.72	8.52	10.76	18.56	18.25	16.41	15.39	13.50
T-Bii	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.1
ZTT	0.4	2.7	1.2	0.7	3.7	0.8	0.8	1.8	0.8	1.8	2.3	1.7
GOT	99	105	77	42	48	27	47	49	41	54	44	88
GPT	27	21	20	24	24	35	21	19	15	26	21	22
ALP	640	318	889	388	641	962	940	577	246	637	517	382
LDH	2408	2048	2194	1636	1309	801	1424	2314	1081	1573	1000	1232
CH-E	730	1980	3690	2774	2070	3140	3100	2900	1710	1830	2330	1560
$\gamma$ -GTP	24	20	47	16	13	56	56	50	24	37	56	35
LAP	14	11	11	10	14	15	24	14	33	13	13	15
ACP	45.7	11.4	10.5	12.2	11.0	9.3	10.7	14.3	9.2	17.2	10.7	9.6
WBC	8100	19700	9000	11200	13800	6300	7000	9200	12200	13800	10700	7200
RBC	678	482	473	470	471	572	508	500	543	453	486	437
AMY	306	260	361	397	274	621	359	442	381	402	530	326
T-cho	51	75	95	106	83	101	123	88	97	92	104	85
LIP	89	32	80	43	37	96	29	40	29	28	64	55
BS	2	42	35	62	61	44	29	68	31	64	61	49
Hb	16.8	11.8	12.2	12.2	12.2	14.0	13.3	12.6	14.4	11.6	12.1	11.8
Ht	57.2	37.8	39.6	40.3	37.3	44.3	43.1	40.8	44.6	36.9	38.3	36.9
MCV	84	78	84	86	79	77	85	82	82	81	79	84
MCH	24.8	24.5	25.8	26.0	25.9	24.5	26.2	25.2	26.5	25.6	24.9	27.0
MCHC	29.4	31.2	30.8	30.3	32.7	31.6	30.9	30.9	32.3	31.4	31.6	32.0
Platelet	30.5	37.2	59.6	52.1	67.7	31.6	44.9	56.4	33.4	67.7	33.0	46.4
$\beta$ -Lp	91	132	197	212	166	193	306	187	371	153	165	145
T-G	24	79	62	76	63	64	120	91	224	65	64	28
T-Li	89	32	80	43	37	96	29	40	29	28	64	55
P-Li	132	154	148	165	126	133	179	160	150	164	166	128
UA	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.2
BUN	159.8	21.7	36.6	17.5	33.0	24.8	41.4	49.9	27.8	18.9	20.2	18.6
CREA	1.4	0.5	0.5	0.6	0.4	0.8	0.5	0.7	0.6	0.5	0.7	0.8
Na	171	140	145	145	142	145	148	145	139	139	143	142
K	12.2	7.0	7.4	7.1	8.0	7.1	7.3	6.8	7.2	7.0	6.2	6.9
Cl	132	99	107	106	104	105	110	107	101	103	104	106
Ca	3.7	4.3	4.7	4.7	4.7	4.7	4.9	4.8	4.2	4.5	4.8	4.7
ASLO	160	20	20	20	20	20	20	40	20	20	20	80

( \* 1988. 5. 24. Okayama, TAKAHASHI )

Table IX Blood Analysis of Japanese Monkeys of Hiroshima Troop

No.	1	2	3	4	5	6	7
TP	6.0	5.9	7.4	7.0	6.6	6.9	6.4
A/G	0.82	1.19	1.55	1.19	1.64	1.38	1.56
ALB	2.7	3.2	4.5	3.8	4.1	4.0	3.9
LDH 1	303(21%)	230(23%)	251(22%)	233(20%)	284(20%)	253(20%)	196(20%)
2	317(22%)	218(22%)	252(22%)	245(21%)	312(22%)	228(18%)	205(21%)
3	317(22%)	230(23%)	274(24%)	257(22%)	327(23%)	253(20%)	235(24%)
4	303(21%)	190(19%)	240(21%)	257(22%)	313(22%)	291(23%)	205(21%)
5	202(14%)	130(13%)	126(11%)	175(15%)	185(13%)	240(19%)	137(14%)
H Suburet	54%	56%	56%	52%	53%	49%	53%
M Suburet	46%	44%	44%	48%	47%	51%	47%
T-Bii	0.1	0.1	0.1	0.1	0.1	0.1	0.2
ZTT	1.5	0.5	0.8	0.8	0.1	1.8	1.1
GOT	54	40	45	43	55	49	54
GPT	13	16	27	17	28	22	14
ALP	671	356	953	734	700	736	678
LDH	1442	998	1143	1167	1421	1265	978
CH·E	3180	1360	2450	3290	1470	2510	2620
$\gamma$ -GTP	42	36	30	46	57	55	44
LAP	15	13	14	13	13	13	10
ACP	6.7	6.9	7.9	6.8	9.6	8.5	5.9
WBC	11500	11500	10300	10500	14200	14900	7200
RBC	443	456	538	538	450	504	528
Hb	12.3	11.8	14.3	14.3	12.9	13.8	14.5
Ht	38.8	36.3	44.1	44.5	40.1	43.3	45.1
MCV	88	80	82	83	89	86	85
MCH	27.8	25.9	26.6	26.6	28.7	27.4	27.5
MCHC	31.7	32.5	32.4	32.1	32.2	31.9	32.2
Platelet	54.5	45.0	34.0	40.9	48.5	—	41.1
AMY	544	956	360	503	488	349	699
T-cho	171	125	145	158	125	115	151
$\beta$ -Lp	419	166	236	255	207	184	309
T-G	65	29	55	50	48	74	47
T-Li	14	19	24	14	21	16	12
P-Li	213	200	212	223	206	190	197
UA	0.2	0.1	0.2	0.1	0.1	0.1	0.1
BUN	17.3	13.2	20.2	23.9	29.2	33.0	27.5
CREA	0.7	0.8	0.7	0.9	0.7	0.9	0.7
Na	146	144	146	148	145	146	144
K	4.4	3.5	3.7	3.8	3.6	4.3	4.4
Cl	103	103	104	103	100	104	103
Ca	4.2	4.6	4.9	4.8	4.5	5.0	4.6
ASLO	40	80	20	40	40	40	80

( \* 1988. 10. 26. Hiroshima )

8	9	10	11	12	13	14	15	16
7.0	6.7	7.1	6.5	7.9	8.1	6.8	6.7	7.4
1.69	1.48	1.15	1.10	1.55	1.45	1.27	1.48	1.39
4.4	4.0	3.8	3.4	4.8	4.8	3.8	4.0	4.3
204(23%)	196(22%)	256(25%)	324(22%)	246(26%)	179(25%)	333(25%)	186(32%)	448(19%)
195(22%)	177(20%)	256(25%)	324(22%)	236(25%)	179(25%)	345(26%)	146(25%)	449(19%)
195(22%)	213(24%)	225(22%)	310(21%)	189(20%)	157(22%)	293(22%)	116(20%)	448(19%)
177(20%)	187(21%)	184(18%)	295(20%)	142(15%)	114(16%)	200(15%)	76(13%)	472(20%)
115(13%)	116(13%)	102(10%)	221(15%)	132(14%)	86(12%)	160(12%)	58(10%)	543(23%)
55%	54%	59%	54%	58%	59%	59%	64%	48%
45%	46%	41%	46%	42%	41%	41%	35%	52%
0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
0.5	1.0	0.7	1.2	1.1	2.3	0.7	0.6	2.0
52	51	40	51	40	36	41	32	131
23	17	23	18	27	21	28	19	48
1104	556	713	644	914	648	671	576	801
886	889	1023	1474	945	715	1331	582	2360
2260	2360	2810	1290	2600	2070	2070	1760	3930
56	54	64	45	64	61	49	45	40
20	11	18	22	25	14	14	16	20
9.2	7.1	10.0	11.8	7.9	7.7	10.5	5.8	8.7
9700	11900	16100	10500	11000	14300	10000	8300	22600
505	552	493	450	604	519	504	424	533
13.2	14.5	13.0	12.3	13.9	14.0	13.5	11.7	14.4
40.8	45.5	41.0	39.1	44.4	43.8	43.2	36.4	46.4
81	82	84	87	74	84	86	86	87
26.1	26.3	26.4	27.3	23.0	27.0	26.8	27.6	27.0
32.4	31.9	31.5	31.5	31.3	32.0	31.3	32.1	31.0
34.9	24.1	45.1	35.3	49.4	32.3	47.4	37.5	48.0
352	368	452	701	723	328	565	532	349
159	145	196	163	229	138	151	118	175
198	275	192	359	518	249	369	157	416
41	45	25	86	107	54	41	25	145
15	13	15	24	13	22	22	20	19
254	201	261	216	174	195	182	183	214
0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.3
29.0	25.4	21.7	26.9	41.2	29.5	34.5	37.4	36.9
0.9	0.9	1.0	0.6	1.2	1.2	0.9	0.8	1.1
142	145	149	141	150	150	149	144	150
3.7	3.8	3.6	4.1	3.8	3.5	4.3	3.7	3.8
99	104	104	101	103	103	107	105	106
4.7	4.5	4.6	4.4	5.0	5.0	4.5	4.2	5.2
20	40	20	20	20	40	20	160	80