

AC group, Day 2

Findings	Group Pretreatment Grade	Vehicle control					5 nm Ag (1 mg/mL)					AgNO ₃ (1 mg/mL)				
		AC					AC					AC				
		-	±	+	2+	3+	-	±	+	2+	3+	-	±	+	2+	3+
Epidemis																
Parakeratosis, focal		2	2	0	0	0	1	3	0	0	0	1	3	0	0	0
Decrease, keratohyaline granule		3	1	0	0	0	2	2	0	0	0	3	1	0	0	0
Attachment, brown pigment		4	0	0	0	0	1	2	1	0	0	0	4	0	0	0
Crust, focal		3	1	0	0	0	4	0	0	0	0	4	0	0	0	0
Thickening		0	4	0	0	0	0	4	0	0	0	0	4	0	0	0
Dermis																
Proliferation, fibroblast, focal		3	1	0	0	0	4	0	0	0	0	4	0	0	0	0

Notes) -: No abnormal changes ±: Very slight +: Slight 2+: Moderate 3+: Marked

Numerals represent the number of animals.

**P<0.01: Significantly different from control (Mann-Whitney U test).

#P<0.05: Significantly different from control (Fisher's exact test).

Vehicle control: 2 mM citric acid solution

AC: Acetone wiping

図 8. AC 処理群の貼付部位皮膚の病理組織学的変化。 ナノ銀および銀イオン投与群では、褐色色素の付着がみられた。また、全投与群において、ケラトヒアリン顆粒の減少を伴う錯角化等がみられたが、限局的であり、投与群間に差は認められなかった。

Pretreatment	Group	Skin		Liver		Blood	
		Day 2	Day 5	Day 2	Day 5	Day 2	Day 5
No pretreatment	Vehicle control	<0.05	-	<0.05	-	<0.05	-
	5 nm Ag (1 mg/mL)	9.7	-	<0.05	-	<0.05	-
	AgNO ₃ (1 mg/mL)	2.5	-	<0.05	-	<0.05	-
TP	Vehicle control	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	5 nm Ag (1 mg/mL)	63.0	26.5	<0.05	<0.05	<0.05	<0.05
	5 nm Ag (1 mg/mL, TP-)	42.5	14.5	<0.05	<0.05	<0.05	<0.05
	AgNO ₃ (1 mg/mL)	88.0	13.4	0.12	0.07	<0.05	<0.05
AC	Vehicle control	<0.05	-	<0.05	-	<0.05	-
	5 nm Ag (1 mg/mL)	97.5	-	<0.05	-	<0.05	-
	AgNO ₃ (1 mg/mL)	25.0	-	<0.05	-	<0.05	-

Each value shows mean (ppm).

The lower limits of Ag detection: 0.05 ppm.

-: Not examined

Vehicle control: 2 mM citric acid solution

TP: Tape stripping, AC: Acetone wiping

図 9. 皮膚バリア除去による組織中の銀含有量(ICP-MS 分析)。 皮膚では溶媒投与群を除く全投与群において銀が検出された。肝臓では TP 処理を施した銀イオン投与群において銀が検出された。血液ではいずれの投与群においても銀の含有は認められなかった。また、TP 処理群に認められた銀の含有量は、いずれの投与群も貼付後 2 日より 5 日の方が少なかった。

(1) TP group

Group	Vehicle control		5 nm Ag (1 mg/mL)		AgNO ₃ (1 mg/mL)	
	TP		TP		TP	
Pretreatment	TP		TP		-	
Number of animals	11		11		7	
Exposure day	1	277.3 ± 9.5	279.9 ± 8.6	277.4 ± 9.1	280.0 ± 9.5	
Day after exposure	2	245.7 ± 13.0	253.3 ± 13.5	257.1 ± 4.3	248.7 ± 12.6	
	3	256.5 ± 14.4 (7)	263.3 ± 11.0 (7)	267.9 ± 5.9 (5)	270.0 ± 10.5 (7)	
Fasting →	4					
	5	242.2 ± 9.6 (5)	247.9 ± 11.1 (5)	247.6 ± 4.4 (5)	250.8 ± 9.3 (5)	

Each value shows mean (g) ± S.D.
 Not significantly different from control.
 Figures in parentheses indicate number of animals.
 Vehicle control: 2 mM citric acid solution
 TP: Tape stripping

(2) AC group

Group	Vehicle control		5 nm Ag (1 mg/mL)		AgNO ₃ (1 mg/mL)	
	AC		AC		AC	
Pretreatment	AC		AC		AC	
Number of animals	4		4		4	
AC treatment day	1	244.7 ± 2.2	245.9 ± 3.8	243.0 ± 3.7		
	4	263.6 ± 4.8	265.6 ± 8.7	262.2 ± 4.7		
Day after exposure	2	257.1 ± 6.8	261.3 ± 7.7	252.6 ± 8.7		

Each value shows mean (g) ± S.D.
 Not significantly different from control.
 Figures in parentheses indicate number of animals.
 Vehicle control: 2 mM citric acid solution
 AC: Acetone wiping

図 10. 体重。 TP および AC 処理群ともに溶媒投与群と各投与群の間に有意な差は認められなかった。

TP group, Day5

Group	Vehicle control		5 nm Ag (1 mg/mL)		AgNO ₃ (1 mg/mL)	
	TP		TP		TP	
Number of animals	5		5		5	
RBC	10000/μL	697 ± 33	678 ± 23	714 ± 32	665 ± 28	
Hemoglobin	g/dL	14.3 ± 0.7	14.8 ± 0.3	15.2 ± 0.6	14.4 ± 0.4	
Hematocrit	%	41.4 ± 1.5	42.9 ± 1.0	43.7 ± 1.9	42.1 ± 1.1	
MCV	fL	59.5 ± 1.8	63.2 ± 1.6 **	61.3 ± 1.2	63.4 ± 1.5 **	
MCH	pg	20.5 ± 0.7	21.8 ± 0.6 **	21.3 ± 0.4	21.7 ± 0.4 **	
MCHC	g/dL	34.4 ± 0.4	34.5 ± 0.4	34.7 ± 0.2	34.2 ± 0.3	
Platelet	10000/μL	134.1 ± 14.0	126.8 ± 16.4	105.6 ± 42.9	116.3 ± 9.4	
WBC	100/μL	116.3 ± 32.3	111.5 ± 24.3	89.8 ± 10.4	88.6 ± 40.0	
Neutrophil	%	10.2 ± 1.5	13.9 ± 8.7	13.9 ± 4.2	10.4 ± 1.5	
Eosinophil	%	0.8 ± 0.3	0.9 ± 0.3	0.8 ± 0.1	0.9 ± 0.4	
Basophil	%	0.1 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.1 ± 0.1	
Monocyte	%	2.7 ± 0.4	2.6 ± 0.9	2.6 ± 1.1	2.4 ± 0.6	
Lymphocyte	%	86.2 ± 1.8	82.6 ± 9.4	82.7 ± 5.2	86.2 ± 1.9	
Reticulocyte	%	5.42 ± 0.52	5.16 ± 1.22	5.66 ± 0.88	5.39 ± 0.77	

Each value shows mean ± S.D.
 Significantly different from the control group (**: P<0.01).
 Vehicle control: 2 mM citric acid solution
 TP: Tape stripping

図 11. 血液学検査(TP 処理群, Day 5)。 TP 処理をしたナノ銀投与群および銀イオン投与群では、平均赤血球容積および平均赤血球ヘモグロビン量が有意に増加したが、赤血球数、ヘモグロビンおよびヘマトクリット値に有意な差はみられなかった。また、病理組織検査においても、腎臓および脾臓に異常所見は認められなかった。

(1) TP group, Day 2

Group	Pretreatment	Vehicle control		5 mM Ag (1 mg/mL)		AgNO ₃ (1 mg/mL)	
		TP		TP	-	TP	
Number of animals		4		4	2		4
Total protein	g/dL	5.1 ± 0.1		5.1 ± 0.4	5.0 ± 0.2		5.2 ± 0.1
Albumin	g/dL	3.3 ± 0.1		3.2 ± 0.2	3.2 ± 0.1		3.2 ± 0.1
A/G		1.76 ± 0.05		1.77 ± 0.07	1.83 ± 0.01		1.64 ± 0.08
Glucose	mg/dL	213 ± 25		223 ± 59	204 ± 18		204 ± 20
Total cholesterol	mg/dL	58 ± 4		63 ± 15	71 ± 4		59 ± 6
Triglyceride	mg/dL	32 ± 16		31 ± 17	27 ± 10		36 ± 11
AST	U/L	85 ± 13		81 ± 27	68 ± 11		97 ± 20
ALT	U/L	30 ± 7		30 ± 5	28 ± 1		29 ± 7
BUN	mg/dL	17 ± 3		18 ± 2	20 ± 2		15 ± 1
Creatinine	mg/dL	0.22 ± 0.02		0.23 ± 0.02	0.23 ± 0.02		0.22 ± 0.01
ALP	U/L	1233 ± 206		1312 ± 166	1599 ± 260		1218 ± 209
Inorganic phosphorus	mg/dL	8.8 ± 1.4		9.5 ± 1.8	9.3 ± 0.2		8.3 ± 0.5
Ca	mg/dL	9.9 ± 0.3		10.0 ± 0.9	10.1 ± 0.2		9.8 ± 0.2
Na	mEq/L	145.5 ± 0.8		145.8 ± 1.0	147.3 ± 1.7		146.7 ± 1.0
K	mEq/L	4.47 ± 0.37		5.07 ± 2.10	4.08 ± 0.23		3.82 ± 0.20
Cl	mEq/L	104.4 ± 2.2		106.2 ± 2.5	107.9 ± 1.3		105.8 ± 0.6

Each value shows mean ± S.D.

Not significantly different from control.

Vehicle control: 2 mM citric acid solution

TP: Tape stripping

(2) TP group, Day 3

Group	Pretreatment	Vehicle control		5 mM Ag (1 mg/mL)		AgNO ₃ (1 mg/mL)	
		TP		TP	-	TP	
Number of animals		2		2		2	
Total protein	g/dL	5.0 ± 0.1		5.1 ± 0.1	5.3 ± 0.1		5.3 ± 0.1
Albumin	g/dL	3.1 ± 0.1		3.2 ± 0.0	3.3 ± 0.1		3.3 ± 0.1
A/G		1.57 ± 0.02		1.73 ± 0.07	1.70 ± 0.13		1.70 ± 0.13
Glucose	mg/dL	183 ± 13		198 ± 3	200 ± 4		200 ± 4
Total cholesterol	mg/dL	67 ± 14		62 ± 16	66 ± 11		66 ± 11
Triglyceride	mg/dL	19 ± 11		29 ± 1	55 ± 31		55 ± 31
AST	U/L	70 ± 2		79 ± 16	69 ± 1		69 ± 1
ALT	U/L	31 ± 8		34 ± 2	34 ± 2		34 ± 2
BUN	mg/dL	19 ± 1		18 ± 6	16 ± 1		16 ± 1
Creatinine	mg/dL	0.24 ± 0.01		0.22 ± 0.04	0.20 ± 0.00		0.20 ± 0.00
ALP	U/L	1097 ± 54		1555 ± 240	1433 ± 187		1433 ± 187
Inorganic phosphorus	mg/dL	8.4 ± 0.2		8.5 ± 0.4	9.6 ± 1.7		9.6 ± 1.7
Ca	mg/dL	9.5 ± 0.1		9.8 ± 0.1	10.4 ± 0.0		10.4 ± 0.0
Na	mEq/L	144.5 ± 0.9		145.4 ± 1.8	144.5 ± 0.7		144.5 ± 0.7
K	mEq/L	4.69 ± 0.30		4.44 ± 0.06	4.31 ± 0.09		4.31 ± 0.09
Cl	mEq/L	107.0 ± 0.1		107.8 ± 0.6	106.6 ± 0.8		106.6 ± 0.8

Each value shows mean ± S.D.

Not significantly different from control.

Vehicle control: 2 mM citric acid solution

TP: Tape stripping

(3) TP group, Day 5

Group	Pretreatment	Vehicle control		5 mM Ag (1 mg/mL)		AgNO ₃ (1 mg/mL)	
		TP		TP	-	TP	
Number of animals		5		5	5		5
Total protein	g/dL	4.9 ± 0.1		4.9 ± 0.2	4.9 ± 0.2		4.8 ± 0.2
Albumin	g/dL	3.2 ± 0.1		3.2 ± 0.1	3.2 ± 0.2		3.1 ± 0.2
A/G		1.96 ± 0.26		1.84 ± 0.10	1.86 ± 0.10		1.86 ± 0.16
Glucose	mg/dL	144 ± 5		137 ± 13	133 ± 12		114 ± 15 **
Total cholesterol	mg/dL	44 ± 7		49 ± 8	49 ± 7		46 ± 10
Triglyceride	mg/dL	22 ± 6		35 ± 16	22 ± 18		17 ± 5
AST	U/L	64 ± 6		67 ± 8	66 ± 7		63 ± 9
ALT	U/L	23 ± 5		27 ± 3	24 ± 6		23 ± 2
BUN	mg/dL	12 ± 2		12 ± 3	11 ± 1		11 ± 1
Creatinine	mg/dL	0.21 ± 0.01		0.21 ± 0.02	0.20 ± 0.02		0.20 ± 0.02
ALP	U/L	1030 ± 191		1160 ± 148	1265 ± 173		1064 ± 113
Inorganic phosphorus	mg/dL	8.1 ± 0.3		8.3 ± 0.5	8.2 ± 0.5		8.4 ± 0.3
Ca	mg/dL	9.1 ± 0.3		9.3 ± 0.2	9.2 ± 0.2		9.5 ± 0.3
Na	mEq/L	145.2 ± 1.9		146.8 ± 1.2	146.7 ± 0.9		147.7 ± 1.3
K	mEq/L	4.09 ± 0.22		4.04 ± 0.10	4.20 ± 0.20		4.06 ± 0.24
Cl	mEq/L	102.2 ± 0.5		102.4 ± 0.8	102.6 ± 2.0		103.6 ± 1.4

Each value shows mean ± S.D.

Significantly different from the control group (**: P<0.01).

Vehicle control: 2 mM citric acid solution

TP: Tape stripping

図 12. 血液生化学検査(TP 処理群)。貼付後 5 日の銀イオン投与群では、グルコース濃度が有意に低下したが、病理組織学検査において肝臓および副腎に異常所見は認められなかった。

AC group, Day 2

Group		Vehicle control			5 nm Ag(1 mg/mL)			AgNO ₃ (1 mg/mL)		
		AC			AC			AC		
Number of animals		4			4			4		
Total protein	g/dL	5.2 ± 0.2			5.3 ± 0.2			5.0 ± 0.3		
Albumin	g/dL	3.3 ± 0.1			3.3 ± 0.1			3.2 ± 0.3		
A/G		1.74 ± 0.04			1.57 ± 0.09			1.80 ± 0.22		
Glucose	mg/dL	219 ± 11			195 ± 9 **			199 ± 3 *		
Total cholesterol	mg/dL	62 ± 2			65 ± 10			62 ± 5		
Triglyceride	mg/dL	22 ± 4			21 ± 6			20 ± 2		
AST	U/L	76 ± 16			70 ± 10			93 ± 24		
ALT	U/L	32 ± 7			28 ± 1			37 ± 12		
BUN	mg/dL	17 ± 2			18 ± 3			17 ± 5		
Creatinine	mg/dL	0.21 ± 0.01			0.23 ± 0.03			0.23 ± 0.02		
ALP	U/L	1333 ± 81			1345 ± 478			1253 ± 100		
Inorganic phosphorus	mg/dL	9.0 ± 0.5			9.5 ± 1.1			9.5 ± 0.5		
Ca	mg/dL	10.3 ± 0.3			10.6 ± 0.3			10.7 ± 0.2		
Na	mEq/L	143.9 ± 1.6			144.8 ± 1.5			145.5 ± 1.6		
K	mEq/L	4.02 ± 0.19			4.09 ± 0.33			4.01 ± 0.21		
Cl	mEq/L	104.3 ± 2.0			105.5 ± 0.5			105.0 ± 0.9		

Each value shows mean ± S.D.

Significantly different from the control group (*: P<0.05, **: P<0.01).

Vehicle control: 2 mM citric acid solution

AC: Acetone wiping

図 13. 血液生化学検査(AC 処理群). ナノ銀投与群および銀イオン投与群では、グルコース濃度が有意に低下したが、病理組織学検査において肝臓および副腎に異常所見は認められなかった。

(1) TP group, Day 2

Group	Vehicle control		5 nm Ag(1 mg/mL)				AgNO ₃ (1 mg/mL)	
	TP		TP		-		TP	
Pretreatment	TP		TP		-		TP	
Number of animals	4		4		2		4	
Body weight	(g)	249.5 ± 13.5	261.3 ± 6.3	259.9 ± 7.9	243.5 ± 16.9			
Liver	(mg)	11501.2 ± 1890.3	12224.5 ± 1548.2	11716.9 ± 184.8	11064.6 ± 847.2			
	(mg/g)	45.918 ± 3.457	46.710 ± 4.806	45.114 ± 2.086	45.426 ± 1.036			

Each value shows mean ± S.D.

Not significantly different from control.

Vehicle control: 2 mM citric acid solution

TP: Tape stripping

(2) TP group, Day 3

Group	Vehicle control		5 nm Ag(1 mg/mL)		AgNO ₃ (1 mg/mL)	
	TP		TP		TP	
Pretreatment	TP		TP		TP	
Number of animals	2		2		2	
Body weight	(g)	241.4 ± 15.2	252.8 ± 2.5	271.7 ± 17.5		
Liver	(mg)	10482.7 ± 1251.2	12569.7 ± 1125.1	12631.2 ± 155.3		
	(mg/g)	43.356 ± 2.454	49.756 ± 4.938	46.605 ± 3.579		

Each value shows mean ± S.D.

Not significantly different from control.

Vehicle control: 2 mM citric acid solution

TP: Tape stripping

(3) TP group, Day 5

Group	Vehicle control		5 nm Ag(1 mg/mL)					
	TP		TP		-		AgNO ₃ (1 mg/mL)	
Pretreatment	TP		TP		-		TP	
Number of animals	5		5		5		5	
Body weight	(g)	242.2 ± 9.6	247.9 ± 11.1	247.6 ± 4.4	250.8 ± 9.3			
Liver	(mg)	8729.8 ± 1054.2	8653.1 ± 602.0	8202.4 ± 629.2	8292.3 ± 499.8			
	(mg/g)	36.015 ± 3.646	34.889 ± 1.150	33.102 ± 2.060	33.111 ± 2.509			
Kidneys	(mg)	2472.0 ± 178.1	2208.7 ± 196.0	2339.9 ± 88.1	2342.9 ± 163.9			
	(mg/g)	10.202 ± 0.518	8.903 ± 0.527 **	9.448 ± 0.280 *	9.340 ± 0.525 *			
Spleen	(mg)	703.2 ± 175.5	716.0 ± 121.5	657.5 ± 79.9	669.9 ± 110.8			
	(mg/g)	2.890 ± 0.633	2.889 ± 0.464	2.657 ± 0.336	2.662 ± 0.359			
Adrenal glands	(mg)	53.8 ± 7.6	48.2 ± 6.6	51.2 ± 3.4	52.8 ± 3.6			
	(mg/g)	0.222 ± 0.027	0.194 ± 0.024	0.207 ± 0.014	0.210 ± 0.015			

Each value shows mean ± S.D.

Significantly different from the control group (*: P<0.05, **: P<0.01).

Vehicle control: 2 mM citric acid solution

TP: Tape stripping

図 14. 器官重量(TP 処理群). 貼付後 5 日のナノ銀投与群および銀イオン投与群では、腎臓の相対重量の有意な低下がみられたが、病理組織学検査において腎臓に異常所見はみられず、血液生化学検査においても尿素窒素およびクレアチニンの値に有意差は認められなかった。

AC group, Day 2

Group	Vehicle control		5 nm Ag (1 mg/mL)		AgNO ₃ (1 mg/mL)	
	AC		AC		AC	
Pretreatment						
Number of animals	4		4		4	
Body weight (g)	257.1 ± 6.8	261.3 ± 7.7	252.6 ± 8.7			
Liver (mg)	11147.2 ± 697.6	11368.1 ± 861.4	10515.8 ± 657.2			
(mg/g)	43.329 ± 1.798	43.478 ± 2.421	41.610 ± 1.325			

Each value shows mean ± S.D.
 Not significantly different from control.
 Vehicle control: 2 mM citric acid solution
 AC: Acetone wiping

図 15. 器官重量(AC 処理群). AC 処理群の肝臓重量では、溶媒投与群と各投与群の間に有意な差は認められなかった。

(1) TP group, Day 2

Group	Vehicle control		5 nm Ag (1 mg/mL)			AgNO ₃ (1 mg/mL)		
	TP		TP			-		
Pretreatment								
Findings	Grade		Grade			Grade		
	-	± + 2+ 3+	-	± + 2+ 3+	-	± + 2+ 3+	-	± + 2+ 3+
Liver								
Cellular infiltration, mononuclear cell, periportal	3	1 0 0 0	4	0 0 0 0	2	0 0 0 0	4	0 0 0 0
Decrease, glycogen, hepatocyte	3	0 1 0 0	4	0 0 0 0	2	0 0 0 0	3	0 1 0 0
Necrosis, focal	2	2 0 0 0	4	0 0 0 0	2	0 0 0 0	4	0 0 0 0
Vacuolation, cytoplasmic, hepatocyte	4	0 0 0 0	3	1 0 0 0	2	0 0 0 0	4	0 0 0 0

Notes) -: No abnormal changes ±: Very slight +: Slight 2+: Moderate 3+: Marked
 Numerals represent the number of animals.
 Not significantly different from control.
 Vehicle control: 2 mM citric acid solution
 TP: Tape stripping

(2) TP group, Day 3

Group	Vehicle control		5 nm Ag (1 mg/mL)		AgNO ₃ (1 mg/mL)	
	TP		TP		TP	
Pretreatment						
Findings	Grade		Grade		Grade	
	-	± + 2+ 3+	-	± + 2+ 3+	-	± + 2+ 3+
Liver	2		2		2	

Notes) -: No abnormal changes ±: Very slight +: Slight 2+: Moderate 3+: Marked
 Numerals represent the number of animals.
 Not significantly different from control.
 Vehicle control: 2 mM citric acid solution
 TP: Tape stripping

(3) TP group, Day 5

Group	Vehicle control		5 nm Ag (1 mg/mL)			AgNO ₃ (1 mg/mL)		
	TP		TP			-		
Pretreatment								
Findings	Grade		Grade			Grade		
	-	± + 2+ 3+	-	± + 2+ 3+	-	± + 2+ 3+	-	± + 2+ 3+
Liver								
Cellular infiltration, mixed, focal	5	0 0 0 0	4	1 0 0 0	5	0 0 0 0	5	0 0 0 0
Fatty change, hepatocyte, periportal	4	1 0 0 0	4	1 0 0 0	4	1 0 0 0	4	1 0 0 0
Hypertrophy/hyperplasia, Kupffer cell	4	1 0 0 0	5	0 0 0 0	5	0 0 0 0	5	0 0 0 0
Kidney								
Basophilic tubule, cortex	2	3 0 0 0	2	3 0 0 0	2	3 0 0 0	3	1 1 0 0
Cast, hyalin, medulla, unilateral	5	0 0 0 0	4	1 0 0 0	5	0 0 0 0	5	0 0 0 0
Dilatation, pelvis, unilateral	5	0 0 0 0	3	0 1 1 0	5	0 0 0 0	5	0 0 0 0
Spleen								
Hematopoiesis, extramedullary	0	0 4 1 0	0	0 3 2 0	0	0 3 2 0	0	0 5 0 0
Adrenal gland	5		5		5		5	

Notes) -: No abnormal changes ±: Very slight +: Slight 2+: Moderate 3+: Marked
 Numerals represent the number of animals.
 Not significantly different from control.
 Vehicle control: 2 mM citric acid solution
 TP: Tape stripping

図 16. 病理組織学所見(TP 処理群). 貼付後 2 および 3 日の肝臓ならびに貼付後 5 日の肝臓、腎臓、脾臓および副腎では、銀投与によると思われる変化は認められなかった。

AC group, Day 2

Findings	Group	Vehicle control					5 mM Ag (1 mg/mL)					AgNO ₃ (1 mg/mL)				
	Pretreatment	AC					AC					AC				
	Grade	-	±	+	2+	3+	-	±	+	2+	3+	-	±	+	2+	3+
Liver		4					4					4				

Notes) -: No abnormal changes ±: Very slight +: Slight 2+: Moderate 3+: Marked

Numerals represent the number of animals.

Not significantly different from control.

Vehicle control: 2 mM citric acid solution

AC: Acetone wiping

図 17. 病理組織学所見(AC 処理群). 肝臓では、全投与群において変化は認められなかった。

研究成果の刊行に関する一覧表

書籍

著者氏名	論文タイトル名	書籍全体の編集者名	書籍名	出版社名	出版地	出版年	ページ
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