

# Onset and Progression of Post-Mortem Histological Changes in the Kidneys of RccHan<sup>TM</sup>:WIST Rats

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## SUPPLEMENTARY TABLES:

**Supplementary Table S1:** Timepoints and conditions evaluated during the study.

**Supplementary Table S2:** Postmortem histological findings in the kidney of exsanguinated outbred RccHan<sup>TM</sup>: WIST rats stored at room temperature (18-22 °C) and necropsied at different time points after death. Postmortem changes were scored from 0 to 3 (i.e., 0 = absent to minimal; 1 = mild; 2 = moderate; 3 = marked) based on their distribution, extension, and intensity degree.

**Supplementary Table 3:** Postmortem histological findings in the kidney of non-exsanguinated outbred RccHan<sup>TM</sup>: WIST rats stored under refrigeration (2-4 °C) and necropsied at different time points after death. Post-mortem changes were scored from 0 to 3 (i.e., 0 = absent to minimal; 1 = mild; 2 = moderate; 3 = marked) based on their distribution, extension, and intensity degree.

**Supplementary Table 1:** Timepoints and conditions evaluated during the study.

Temperature	Postmortem time	Sex	Exsanguination status	Storage
Room temperature (18-22°C)	0.5h	Female	Exsanguinated	Uncovered
			Non-exsanguinated	Uncovered
	1h	Female	Exsanguinated	Uncovered
			Non-exsanguinated	Uncovered
	4h	Female	Exsanguinated	Uncovered
			Non-exsanguinated	Uncovered
	8h	Female	Exsanguinated	Uncovered
			Non-exsanguinated	Uncovered
	12h	Female	Exsanguinated	Uncovered
			Non-exsanguinated	Uncovered
	24h	Female	Exsanguinated	Uncovered
			Non-exsanguinated	Uncovered
	36h	Female	Exsanguinated	Uncovered
			Non-exsanguinated	Uncovered
	48h	Female	Exsanguinated	Uncovered
			Non-exsanguinated	Uncovered
Refrigerator (2-4°C)	7d	Male	Non-exsanguinated	Plastic bag
		Female	Non-exsanguinated	Cardboard box
				Plastic bag
				Cardboard box
	14d	Male	Non-exsanguinated	Plastic bag
		Female	Non-exsanguinated	Cardboard box

**Supplementary Table 2:** Postmortem histological findings in the kidney of exsanguinated outbred RccHan<sup>TM</sup>: WIST rats stored at room temperature (18-22 °C) and necropsied at different time points after death. Postmortem changes were scored from 0 to 3 (i.e., 0 = absent to minimal; 1 = mild; 2 = moderate; 3 = marked) based on their distribution, extension, and intensity degree.

	TIME AFTER DEATH							
	0.5h	1h	4h	8h	12h	24h	36h	48h
<b>CORTEX - Glomeruli</b>								
Chromatin condensation & Nuclear shrinkage	-	-	-	-	1	1	2 <sup>a</sup>	2 <sup>a</sup>
Homogenisation of mesangium	-	-	-	-	1	2	2	2 <sup>b</sup>
Granular Cellular debris	-	-	-	-	1	1	2	1
<i>AVERAGE</i>	0.00	0.00	0.00	0.00	1.00	1.33	2.00	1.67
<b>CORTEX – Proximal Convoluted Tubule (PCT)</b>								
Chromatin condensation & Nuclear shrinkage	-	-	1	1	1 <sup>a</sup>	2 <sup>a</sup>	3 <sup>a</sup>	2 <sup>a</sup>
Cellular swelling & Cytoplasmic dissolution	-	-	-	1	1	2	N/Q	N/Q
Cellular rupture & Sloughing	-	-	-	-	1 <sup>c</sup>	2 <sup>c</sup>	3 <sup>c</sup>	3 <sup>c</sup>
Coalescence of Epithelia	-	-	-	-	-	-	2	2
<i>AVERAGE</i>	0.00	0.00	0.25	0.50	0.75	1.50	2.75	2.50
<b>CORTEX – Distal Convoluted Tubule (DCT)</b>								
Chromatin condensation & Nuclear shrinkage	-	-	1	1	2	3	3	3
Cellular swelling & Cytopl. dissolution	-	1	1	1	2	3	N/Q	N/Q
Cellular rupture & Sloughing	-	-	-	1	1	3	3	3
<i>AVERAGE</i>	0.00	0.33	0.67	1.00	1.67	3.00	3.00	3.00
<b>OUTER STRIPE OUTER MEDULLA (OSOM)</b>								
Chromatin condensation & Nuclear shrinkage	-	-	1	1	1	1	2 <sup>a</sup>	2 <sup>a</sup>
Cellular swelling & Cytopl. dissolution	-	-	-	-	1	2	3	3
<i>AVERAGE</i>	0.00	0.00	0.50	0.50	1.00	1.50	2.50	2.50
<b>INNER STRIPE OUTER MEDULLA (ISOM)</b>								
Chromatin condensation & Nuclear shrinkage	-	-	1	3	3	3	3	3
Cellular swelling & Cytopl. dissolution <sup>d</sup>	-	-	1 <sup>d</sup>	2 <sup>d</sup>	3 <sup>d</sup>	3 <sup>d</sup>	2	3
Cellular rupture & Sloughing	-	-	-	1	1	2	3	3
<i>AVERAGE</i>	0.00	0.00	1.00	2.00	2.33	2.67	2.67	3.00
<b>INNER MEDULLA</b>								
Cellular Detachment	-	-	-	-	1	3	2	3
Cellular shrinkage	-	-	-	-	-	2	1	2
<i>AVERAGE</i>	0.00	0.00	0.00	0.00	1.00	2.50	1.50	2.50
<b>PELVIS &amp; PAPILLA</b>								
Urothelium detachment/sloughing	-	-	-	1	1	1	3	3

<sup>a</sup> Ass. with nuclear fading

<sup>b</sup> Protrusion of proximal tubule

<sup>c</sup> Ass. with lumen debris

<sup>d</sup> More pronounced basally

**Supplementary Table 3:** Postmortem histological findings in the kidney of non-exsanguinated outbred RccHanTM: WIST rats stored under refrigeration (2-4 °C) and necropsied at different time points after death. Post-mortem changes were scored from 0 to 3 (i.e., 0 = absent to minimal; 1 = mild; 2 = moderate; 3 = marked) based on their distribution, extension, and intensity degree.

	PLASTIC BAG				CARDBOARD BOX			
	7 days		14 days		7 days		14 days	
	F	M	F	M	F	M	F	M
<b>CORTEX - Glomeruli</b>								
Chromatin condensation & Nuclear shrinkage	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>
Homogenisation of mesangium	2 <sup>b</sup>	2 <sup>b</sup>	2 <sup>b</sup>	2 <sup>b</sup>	2 <sup>b</sup>	2 <sup>b</sup>	2 <sup>b</sup>	2 <sup>b</sup>
Granular Cellular debris	1	1	1	1	1	1	1	1
<i>AVERAGE</i>	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
<b>CORTEX – Proximal Convoluted Tubule (PCT)</b>								
Chromatin condensation & Nuclear shrinkage	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>
Cellular swelling & Cytoplasmic dissolution	N/Q	N/Q	N/Q	N/Q	N/Q	N/Q	N/Q	N/Q
Cellular rupture & Sloughing	3 <sup>c</sup>	3 <sup>c</sup>	3 <sup>c</sup>	3 <sup>c</sup>	3 <sup>c</sup>	3 <sup>c</sup>	3 <sup>c</sup>	3 <sup>c</sup>
Coalescence of Epithelia	3	3	3	3	3	3	3	3
<i>AVERAGE</i>	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
<b>CORTEX – Distal Convoluted Tubule (DCT)</b>								
Chromatin condensation & Nuclear shrinkage	3	3	3	3	3	3	3	3
Cellular swelling & Cytopl. dissolution	N/Q	N/Q	N/Q	N/Q	N/Q	N/Q	N/Q	N/Q
Cellular rupture & Sloughing	3	3	3	3	3	3	3	3
<i>AVERAGE</i>	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
<b>OUTER STRIPE OUTER MEDULLA (OSOM)</b>								
Chromatin condensation & Nuclear shrinkage	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>
Cellular swelling & Cytopl. dissolution	3	3	3	3	3	3	3	3
<i>AVERAGE</i>	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
<b>INNER STRIPE OUTER MEDULLA (ISOM)</b>								
Chromatin condensation & Nuclear shrinkage	3	3	3	3	3	3	3	3
Cellular swelling & Cytopl. dissolution	3	3	3	3	3	3	3	3
Cellular rupture & Sloughing	3	3	3	3	3	3	3	3
<i>AVERAGE</i>	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
<b>INNER MEDULLA</b>								
Cellular Detachment	3	3	3	3	3	3	3	3
Cellular shrinkage	2	2	2	2	2	2	2	2
<i>AVERAGE</i>	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
<b>PELVIS &amp; PAPILLA</b>								
Urothelium detachment/sloughing	3	3	3	3	3	3	3	3

<sup>a</sup> Ass. with nuclear fading

<sup>b</sup> Protrusion of proximal tubule

<sup>c</sup> Ass. with lumen debris