

Long-Term Angiotensin II Receptor Blockade Limits Hypertension, Aortic Dysfunction and Structural Remodelling in a Rat Model of Chronic Kidney Disease

Supplementary Tables

Omar Z. Ameer^a, Mark Butlin^a, Elena Kaschina^b, Manuela Sommerfeld^b, Alberto P. Avolio^a, and Jacqueline K. Phillips^{a*}

^a *Department of Biomedical Science, Faculty of Medicine and Health Sciences, Macquarie University, Sydney, New South Wales, Australia.*

^b *Center for Cardiovascular Research and Institute of Pharmacology, Charité - Universitätsmedizin, Berlin, Germany.*

* Correspondence: jacqueline.phillips@mq.edu.au

Supplementary Tables

Supplementary Table 1: Parameters describing the aortic concentration-response curve to various pharmacological agents in untreated and valsartan treated Lewis and LPK rats

Treatment	Agent	Parameters					
		EC ₅₀ (M) (%)		R _{max}		AUC	
		Lewis	LPK	Lewis	LPK	Lewis	LPK
Untreated	NA	2.6x10 ⁻⁷ ± 1.8x10 ⁻⁷	4.1x10 ⁻⁸ ± 1.4x10 ⁻⁸	2.4 ± 0.4N/g	1.5 ± 0.2N/g	9.8 ± 1.6N/g	7.8 ± 0.9N/g
	KCl	14.9 ± 3.4	14.4 ± 3.1	3.5 ± 0.4N/g	2.0 ± 0.4N/g ^a	3.0 ± 0.4N/g	2.0 ± 0.3N/g
	ACh	4.4x10 ⁻⁷ ± 3.0x10 ⁻⁷	2.1x10 ⁻⁶ ± 1.4x10 ⁻⁶	95 ± 3%	59 ± 6% ^a	208 ± 18%	106 ± 26% ^a
	SNP	1.2x10 ⁻⁸ ± 5.3x10 ⁻⁹	8.8x10 ⁻⁹ ± 3.1x10 ⁻⁹	91 ± 5%	82 ± 7%	232 ± 16%	182 ± 20%
Treated	NA	1.1x10 ⁻⁷ ± 2.8x10 ⁻⁸	3.4x10 ⁻⁸ ± 1.1x10 ⁻⁸	3.3 ± 0.4N/g	1.8 ± 0.2N/g ^{a*}	11.8 ± 1.4N/g	8.4 ± 0.7N/g
	KCl	13.1 ± 3.4	65.3 ± 39.2	4.1 ± 0.4N/g	1.8 ± 0.2N/g ^{a*}	3.7 ± 0.4N/g	1.7 ± 0.3N/g ^{a*}
	ACh	4.2x10 ⁻⁷ ± 2.5x10 ⁻⁷	6.5x10 ⁻⁷ ± 2.7x10 ⁻⁷	96 ± 3%	91 ± 7% ^{b*}	231 ± 16%	174 ± 21%
	SNP	2.3x10 ⁻⁸ ± 1.7x10 ⁻⁸	1.1x10 ⁻⁸ ± 1.4x10 ⁻⁹	93 ± 3%	99 ± 1% ^{b*}	237 ± 21%	222 ± 8%

NA, noradrenaline; KCl, potassium chloride; ACh, acetylcholine; SNP, sodium nitroprusside; EC₅₀, effective concentration at 50%; R_{max}, maximum response; AUC, area under the curve; LPK, Lewis polycystic kidney rat. Results are expressed as mean ± SEM. a, *P*<0.05 between untreated Lewis and LPK; a*, *P*<0.05 between treated Lewis and LPK; b*, *P*<0.05 between untreated and treated LPK. Minimum n values in each group: Lewis untreated = 8; Lewis treated = 7; LPK untreated = 6; LPK treated = 6.

Supplementary Table 2: Parameters describing the endothelium-mediated mechanisms following incubation with various pharmacological agents in untreated and valsartan treated Lewis and LPK rats

Treatment	Agent	Parameters					
		EC ₅₀ (M) (%)		R _{max} (%)		AUC (%)	
		Lewis	LPK	Lewis	LPK	Lewis	LPK
Untreated	ACh	4.4x10 ⁻⁷ ± 3.0x10 ⁻⁷	2.1x10 ⁻⁶ ± 1.4x10 ⁻⁶	95 ± 3	59 ± 6 ^a	208 ± 18	106 ± 26 ^a
	L-Arg	5.1x10 ⁻⁷ ± 3.2x10 ⁻⁷	5.7x10 ⁻⁷ ± 3.4x10 ⁻⁷	83 ± 5	49 ± 6 ^a	225 ± 46	109 ± 18 ^a
	L-NAME	1.7x10 ⁻⁶ ± 8.6x10 ⁻⁷	1.4x10 ⁻⁶ ± 6.2x10 ⁻⁷	45 ± 8 ^d	27 ± 4 ^d	104 ± 26 ^d	38 ± 7
	L-Arg+L-NAME	1.0x10 ⁻⁶ ± 6.4x10 ⁻⁷	1.4x10 ⁻⁶ ± 8.4x10 ⁻⁷	50 ± 10	30 ± 7	139 ± 31	73 ± 10
	Indo+L-NAME	8.9x10 ⁻⁷ ± 7.8x10 ⁻⁷	2.3x10 ⁻⁶ ± 1.6x10 ⁻⁶	30 ± 7	32 ± 10	84 ± 18	36 ± 13
Treated	ACh	4.2x10 ⁻⁷ ± 2.5x10 ⁻⁷	6.5x10 ⁻⁷ ± 2.7x10 ⁻⁷	96 ± 3	91 ± 7 ^{b*}	231 ± 16	174 ± 21
	L-Arg	4.0x10 ⁻⁷ ± 1.9x10 ⁻⁷	5.4x10 ⁻⁷ ± 3.6x10 ⁻⁷	89 ± 5	76 ± 5 ^{b*}	217 ± 33	185 ± 27
	L-NAME	1.3x10 ⁻⁶ ± 5.7x10 ⁻⁷	2.3x10 ⁻⁶ ± 5.8x10 ⁻⁷	57 ± 7 ^d	41 ± 6 ^d	98 ± 13 ^d	84 ± 22 ^d
	L-Arg+L-NAME	1.5x10 ⁻⁷ ± 7.3x10 ⁻⁸	1.0x10 ⁻⁶ ± 3.8x10 ⁻⁷	73 ± 7	52 ± 6	193 ± 21 ^e	108 ± 24 ^{a*}
	Indo+L-NAME	8.7x10 ⁻⁷ ± 4.4x10 ⁻⁷	2.6x10 ⁻⁶ ± 1.4x10 ⁻⁶	46 ± 6	42 ± 4	119 ± 21	81 ± 8

ACh, acetylcholine; L-Arg, L-arginine; L-NAME, Nω-nitro-L-arginine methyl ester; Indo, indomethacin; EC50, effective concentration at 50%; Rmax, maximum response; AUC, area under the curve; LPK, Lewis polycystic kidney rat. Results are expressed as mean ± SEM. a, *P*<0.05 between untreated Lewis and LPK; a*, *P*<0.05 between treated Lewis and LPK; b*, *P*<0.05 between untreated and treated LPK; d, *P*<0.05 drug effect within strain and treatment group for ACh vs. L-NAME; e, *P*<0.05 drug effect within strain and treatment group for L-NAME vs. L-NAME and L-Arg. ACh data are duplicates of ACh data presented in Supplementary Table 1, provided for ease of comparison. Minimum n values in each group: Lewis untreated = 8; Lewis treated = 7; LPK untreated = 6; LPK treated = 6.