

$CV_{longitudinal}$ (m/s)	Model	Canine Experiments
RA, no remodelling	0.94	0.80-1.10 [1, 2, 3, 4]
BB, no remodelling	1.18	1.00-1.30 [2, 5, 6, 7]
RA, after remodelling/RAP	0.64	0.60-0.90 [2, 1, 8]

Table S6: Longitudinal conduction velocity values ($CV_{longitudinal}$) measured in the 3D atrial model in the current study at a BCL of 350 ms, alongside corresponding experimental values measured experimentally in dogs.

References

- [1] Gaspo, R., Bosch, R.F., Talajic, M., Nattel, S.: Functional Mechanisms Underlying Tachycardia-Induced Sustained Atrial Fibrillation in a Chronic Dog Model. *Circulation* **96**(11) (dec 1997) 4027–4035
- [2] Li, D.K.B., Fareh, S., Leung, T.K., Nattel, S.: Promotion of Atrial Fibrillation by Heart Failure in Dogs : Atrial Remodeling of a Different Sort. *Circulation* **100**(1) (jul 1999) 87–95
- [3] Guerra, J.M.: Effects of the Gap Junction Modifier Rotigaptide (ZP123) on Atrial Conduction and Vulnerability to Atrial Fibrillation. *Circulation* **114**(2) (jul 2006) 110–118
- [4] Koura, T.: Anisotropic Conduction Properties in Canine Atria Analyzed by High-Resolution Optical Mapping: Preferential Direction of Conduction Block Changes From Longitudinal to Transverse With Increasing Age. *Circulation* **105**(17) (apr 2002) 2092–2098
- [5] Spach, M.S., Miller, W.T., Dolber, P.C., Kootsey, J.M., Sommer, J.R., Mosher, C.E.: The functional role of structural complexities in the propagation of depolarization in the atrium of the dog. Cardiac conduction disturbances due to discontinuities of effective axial resistivity. *Circ. Res.* **50**(2) (feb 1982) 175–191
- [6] Rensma, P.L., Allessie, M.A., Lammers, W.J., Bonke, F.I., Schalij, M.: Length of excitation wave and susceptibility to reentrant atrial arrhythmias in normal conscious dogs. *Circ. Res.* **62**(2) (feb 1988) 395–410
- [7] Dolber, P.C., Spach, M.S.: Structure of canine Bachmann's bundle related to propagation of excitation. *Am J Physiol Hear. Circ Physiol* **257**(5) (nov 1989) H1446–1457
- [8] Kumagai, K., Nakashima, H., Urata, H., Gondo, N., Arakawa, K., Saku, K.: Effects of angiotensin II type 1 receptor antagonist on electrical and structural remodeling in atrial fibrillation. *J. Am. Coll. Cardiol.* **41**(12) (jun 2003) 2197–2204