

## Supplementary Material

### *Biomechanical properties of the thoracic aortic wall: effect of location*

**Suppl. Table S1. Biomechanical properties basal (0 days).** n=3 rats, each thoracic aorta into 18 rings.

Parameter	df1	df2	F	p	eta <sup>2</sup>	d <sup>†</sup>
E <sub>low</sub>	17	34	0.9112	0.5679	0.3130	1.34
E <sub>high</sub>	17	34	0.4810	0.9448	0.1939	0.98
AUC	17	34	0.7120	0.7695	0.2625	1.20
Breaking point ( $\sigma$ )	17	34	0.4203	0.9699	0.1736	0.92
Breaking point ( $\lambda$ )	17	34	0.6248	0.8483	0.2380	1.12
Calcium content( $\mu$ g/mg)	17	34	1.0841	0.4059	0.3515	1.48

<sup>†</sup> d was calculated for better comparison with parameters in Table 3.

df1: count freedoms, df2: denominator freedoms, F: F test p: p value, eta<sup>2</sup>: effect size, d: Cohen's effect size

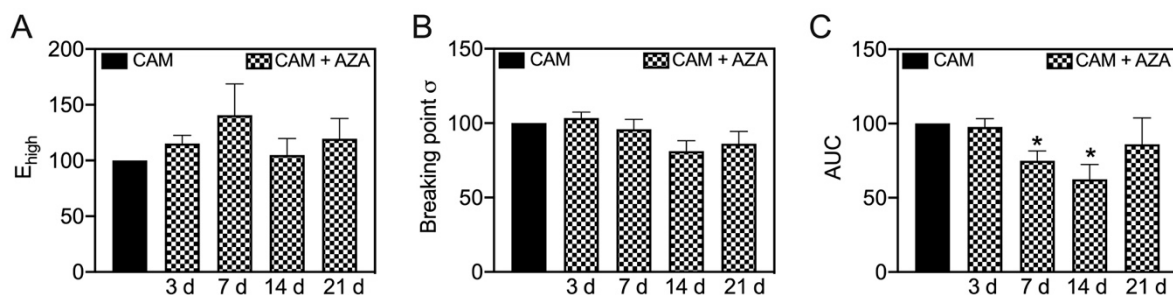
**Suppl. Table S2. Biomechanical properties upon 14 days of treatment with CAM.**

Parameter	df1	df2	F	p	eta <sup>2</sup>	d <sup>†</sup>
E <sub>low</sub>	17	34	0.5736	0.8882	0.2229	1.08
E <sub>high</sub>	17	34	0.8865	0.5929	0.3071	1.34
AUC	17	34	0.8313	0.6494	0.2936	1.28
Breaking point ( $\sigma$ )	17	34	0.5911	0.8752	0.2281	1.08
Breaking point ( $\lambda$ )	17	34	0.6556	0.8217	0.2469	1.14
Calcium content( $\mu$ g/mg)	17	34	0.9777	0.5025	0.3283	1.40

<sup>†</sup> d was calculated for better comparison with parameters in Table 3.

CAM: calcifying medium, df1: count freedoms, df2: denominator freedoms, F: F test p: p value, eta<sup>2</sup>: effect size, d: Cohen's effect size

### *Method validation by a known inductor of vascular calcification: azathioprine*



**Suppl. Figure S1. Effect of azathioprine on biomechanical properties under calcifying conditions.**

Aortic tissue rings were incubated for indicated time-points with calcifying medium (CAM) and azathioprine (100  $\mu$ mol/l) and the stress-stretch curve and respective parameters were determined. Values are normalized to CAM stimulation at respective time-point. n=6, \*p<0.05 compared to CAM at respective time-points. This Figure corresponds to Figure 7 of the main article.