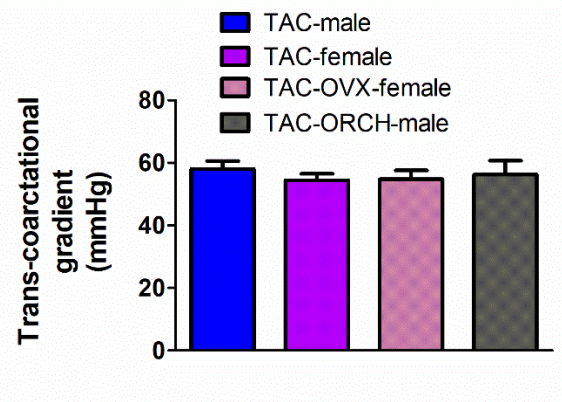

Figure S1. Mean trans-coarctational gradients determined by Doppler echocardiography 4 weeks after transverse aortic constriction (TAC). Male (n = 18), female (n = 29), ovariectomised (OVX) (n = 5) and orchiectomised (ORCH) male (n = 5) mice.

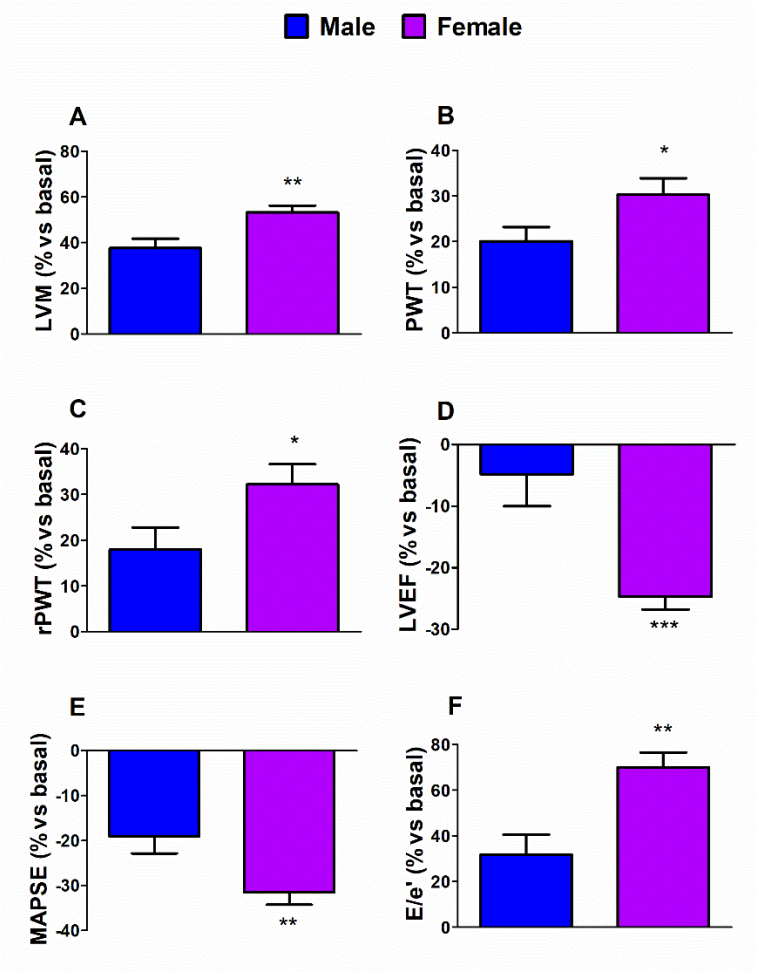

Figure S2. Percent change 4 weeks after TAC versus basal of morphological and functional echocardiographic parameters in male and female mice. A: LVM, LV mass; B: PWT, posterior wall thickness;

C: rPWT, relative posterior wall thickness; D: LVEF, LV ejection fraction; E: MAPSE, mitral annular plane systolic excursion; F: E/e', ratio of peak early transmitral flow velocity to peak early myocardial tissue 1 velocity (e'). Data are means ± SEM. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (Unpaired t-test).

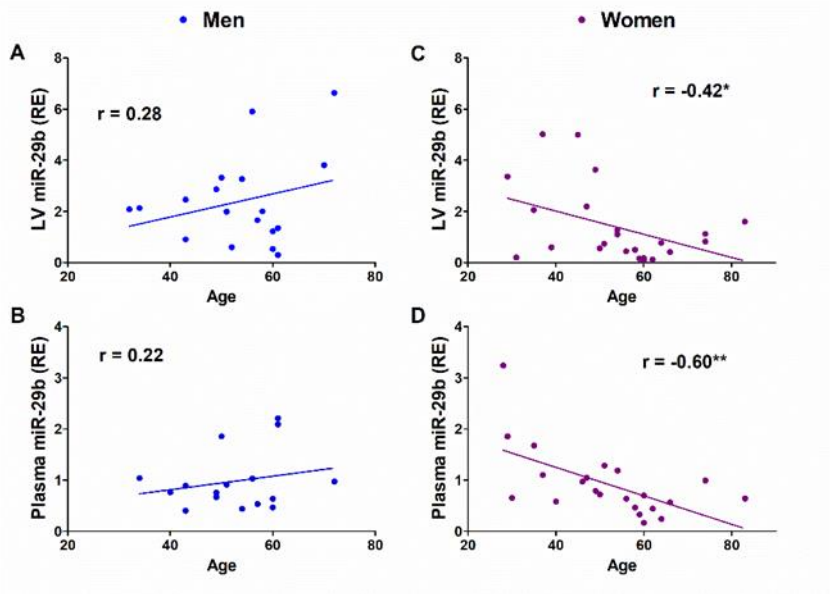

Figure S3. Linear regression and Pearson's correlation analyses between miR-29b expression in the LV and plasma with age in control patients of any age. A: miR-29b relative expression in the LV (RE vs RNU6b) and B: plasma (RE vs Cel-39) from control men. C: miR-29b relative expression in the LV (RE vs RNU6b) and D: plasma (RE vs Cel-39) from control women. r, Pearson's correlation coefficient (*$p < 0.05$, **$p < 0.01$).