

## Supplementary

**Table S1** Echocardiographic ventricular function variables in rats.

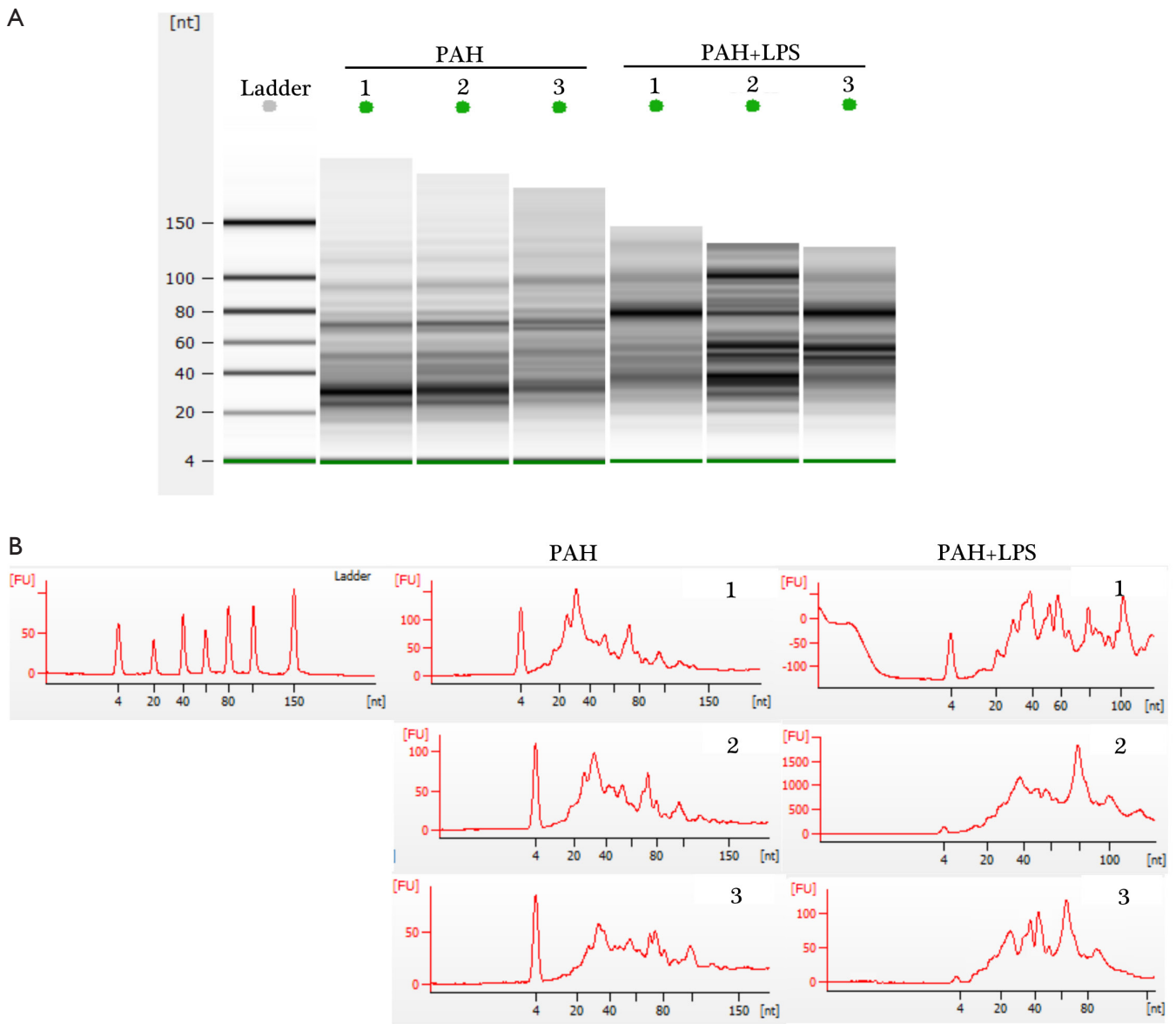
| Variables          | PAH          | PAH+LPS      | P value |
|--------------------|--------------|--------------|---------|
| TAPSE (mm)         | 2.26±0.17    | 1.53±0.25    | 0.026   |
| RVEDD (mm)         | 5.337±0.019  | 6.097±0.298  | 0.023   |
| sPAP (mmHg)        | 80.0±1.6     | 98.7±1.7     | <0.001  |
| Strain %           |              |              |         |
| Basal RV free wall | -11.10±0.51  | -6.57±2.04   | 0.038   |
| Mid RV free wall   | -15.67±4.62  | -5.30±2.51   | 0.049   |
| Basal septal wall  | -17.93±2.74  | -10.00±1.77  | 0.026   |
| Mid septal wall    | -15.63±1.96  | -13.73±5.50  | 0.669   |
| Strain rate I/S    |              |              |         |
| Basal RV free wall | -5.36±0.58   | -3.50±0.51   | 0.027   |
| Mid RV free wall   | -4.83±0.62   | -2.93±0.31   | 0.018   |
| Basal septal wall  | -5.89±1.91   | -3.46±0.25   | 0.149   |
| Mid septal wall    | -3.90±0.97   | -3.90±0.76   | 0.521   |
| BNP (pg/mL)        | 200.77±22.82 | 844.14±29.88 | <0.001  |

Values are the mean ± SD. n=3. PAH: PAH rats; PAH+LPS: PAH rats with LPS treatment. TAPSE, tricuspid annular plane systolic excursion; RVEDD, right ventricle end diastolic diameter; sPAP, pulmonary artery systolic pressure.

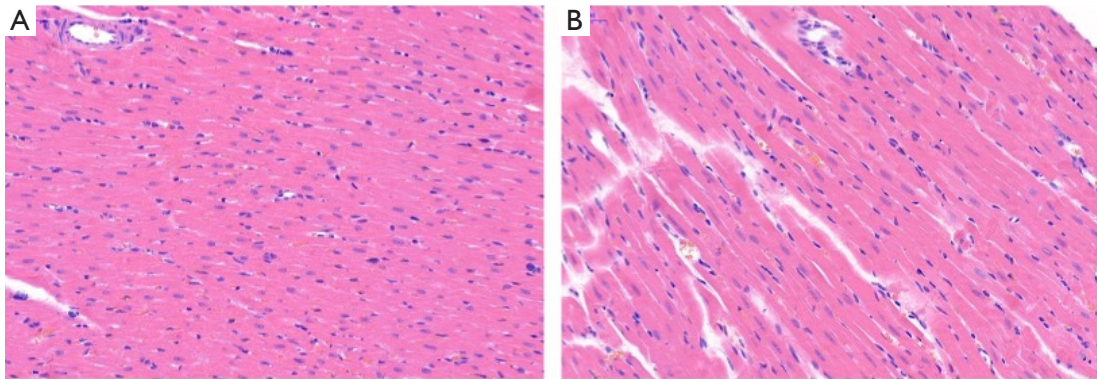
**Table S2** The readouts of MiR-212-3p quantification and NT-pro BNP of PAH patients

| Patient | MiR-212-3P ( $\Delta$ Ct) |               | NT-proBNP (pg/mL) |               |
|---------|---------------------------|---------------|-------------------|---------------|
|         | Before surgery            | After surgery | Before surgery    | After surgery |
| A       | 8.50                      | 6.20          | 443               | 801           |
| B       | 10.38                     | 8.02          | 9,245             | 2,356         |
| C       | 10.65                     | 6.22          | 365               | 509           |
| D       | 10.12                     | 9.17          | 750               | 4,519         |
| E       | 9.37                      | 8.04          | 1,443             | 4,561         |
| F       | 9.60                      | 6.76          | 504               | 1,503         |
| G       | 11.39                     | 10.53         | 3,085             | 2,803         |
| H       | 9.93                      | 11.79         | 2,357             | 7,250         |
| I       | 9.25                      | 12.41         | 5,141             | 5,207         |
| J       | 9.02                      | 5.35          | 2,681             | 7,263         |
| K       | 11.31                     | 5.75          | 1,739             | 5,002         |
| L       | 11.93                     | 7.81          | 379               | 1,404         |
| M       | 9.36                      | 8.49          | 2,107             | 1,888         |
| N       | 9.36                      | 10.30         | 453               | 693           |
| O       | 12.09                     | 9.64          | 5,499             | 2,764         |

Ct, cycle threshold.



**Figure S1** RNA Quality Control. (A) A total RNA sample was degraded for varying times and the resulting samples were analyzed on the Agilent 2100 bioanalyzer. (B) RNA Integrity Number (RIN) visualization.



**Figure S2** Representative of HE staining myocardium of right ventricle from a control rat (A) and PAH rat (B). Scale bar =50  $\mu$ m.