Supplemental Material

Figure S1. (A) Gating strategy for flow cytometry. **(B-C)** Donuts pie chart showing the survival rates of both sexes in acute and chronic HF.

A

Flow cytometry gating strategy

Total Population → Live Population (BUV) → Single Cells → CD45⁺ leukocyte common antigen → CD45⁺CD11b⁺ Monocytes → CD45⁺CD11b⁺Ly6C$^{hi/lo}$ Monocytes

CD45⁺CD11b⁺F4/80⁻Ly6G⁺ Neutrophils

CD45⁺CD11c⁺ Dendritic cells

CD45⁺CD11b⁺F4/80⁺ Macrophages

CD45⁺CD11b⁺ F4/80⁺Ly6C$^{hi/lo}$

C **Acute Survival (MI-d1 to d7)**

Female / Male

Rupture 7%, CHF 7%, Rupture 28%, CHF 12%, Survival 86%, Survival 60%

D **Chronic Survival (MI-d8 to d56)**

Female / Male

CHF 4%, CHF 8%, Survival 96%, Survival 92%

Figure S2. **Heat map showing differential quantity of specialized pro-resolving mediators (SPMs) and epoxyeicosatrienoic acid (EETs) in male and female mice.**
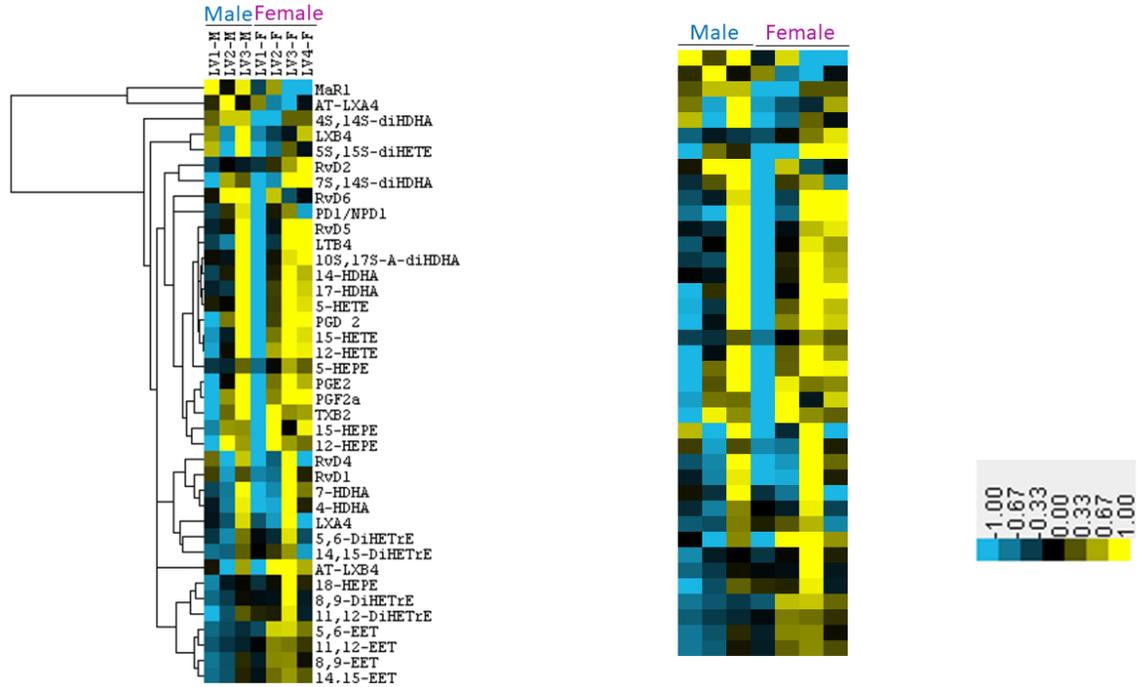
Figure S3. **Biosynthesis of arachidonic acid (AA)-derived proinflammatory mediators in male and female mice post-MI. (A)** Pie chart showing the AA-derived proinflammatory mediators in the left ventricle of male mice at MI-d1. **(B)** Pie chart showing the AA-derived proinflammatory mediators in the left ventricle of female mice at MI-d1. **(C)** Bar graph showing AA-derived proinflammatory mediators of the left ventricle at MI-d1 of male and female mice. MI-d1: males (n=3), females (n=4).
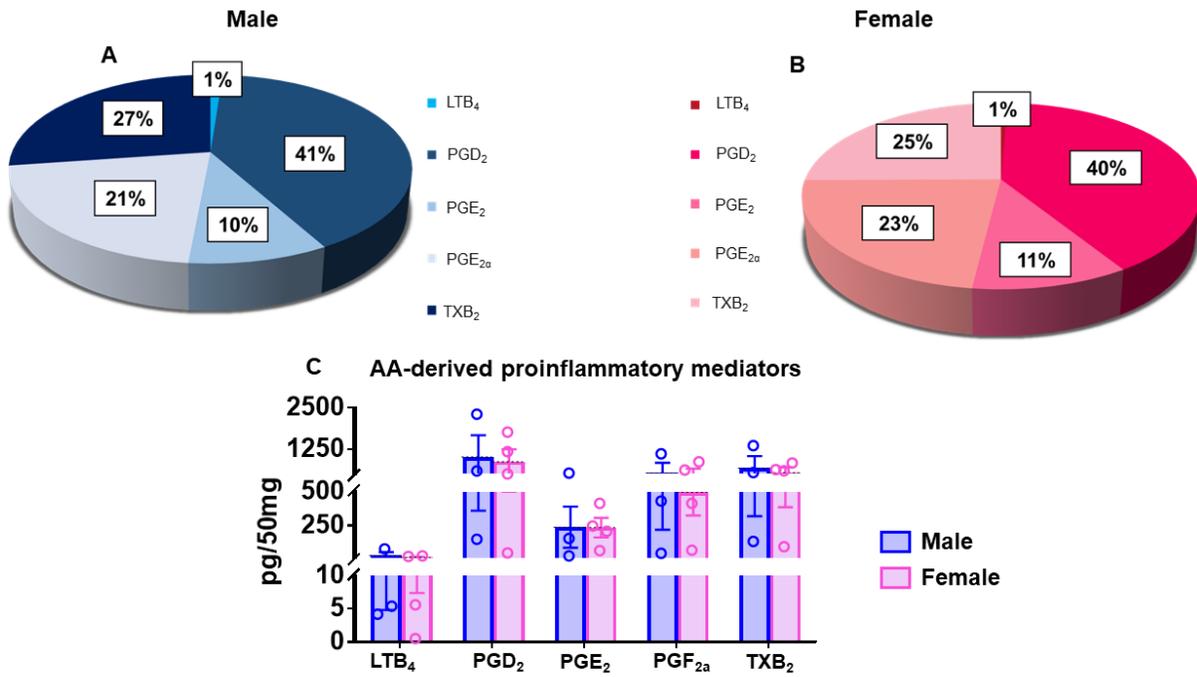
Figure S4. Endogenous biosynthesis of docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA)-derived SPM precursors in male and female mice post-MI (A) Pie chart showing the DHA and EPA precursors in the left ventricle of male mice at MI-d1. **(B)** Pie chart showing the DHA and EPA precursors in the left ventricle of female mice at MI-d1. **(C)** Bar graph showing DHA and EPA precursors of the left ventricle at MI-d1 of male and female mice. MI-d1: males (n=3), females (n=4).
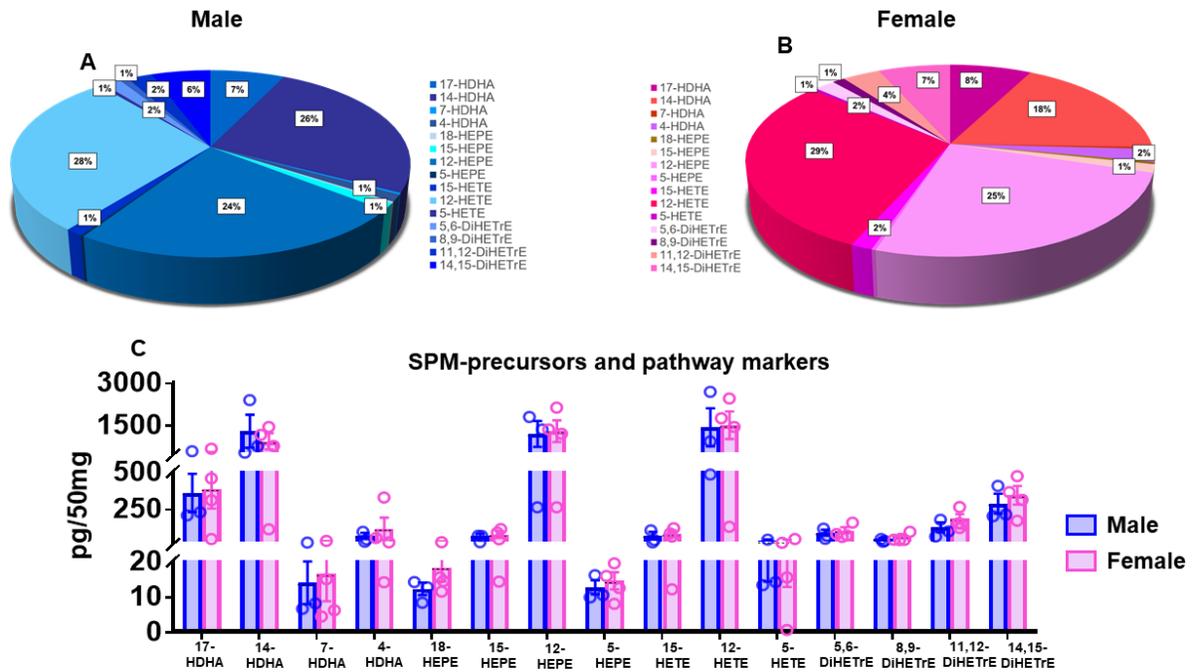
Figure S5. Structural changes in cardiomyocyte area. Wheat germ agglutinin (WGA) staining showing cardiomyocyte area in male and female mice**.** WGA = green, Hoechst = blue, [No-MI: males (n=4), females (n=4); MI-d1: males (n=5), females (n=6); MI-d56: males (n=4), females (n=4).
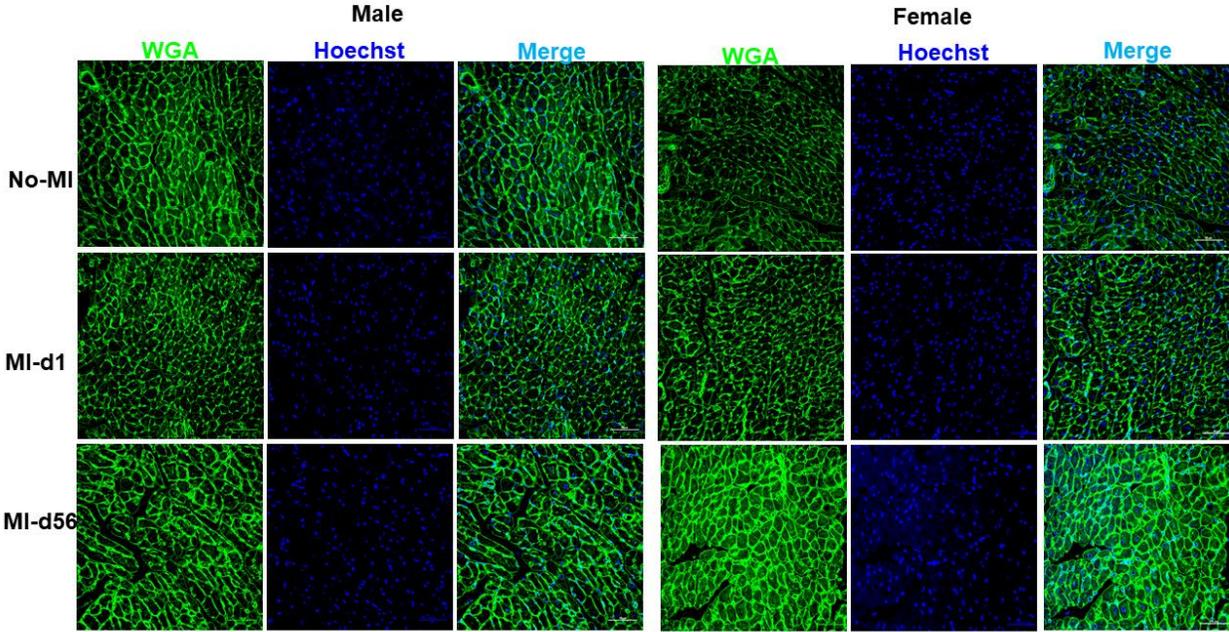
Figure S6. Female mice have higher reparative macrophages (MΦ) compared to male mice post-MI. (A) Plot showing macrophages at No-MI, MI-d1, MI-d3, MI-d5, and MI-d56 in male and female mice. **(B)** Plot showing Ly6C^{lo} and Ly6C^{hi} macrophages at No-MI, MI-d1, MI-d3, MI-d5, and MI-d56 in male and female mice. **(C-E)** Line graphs showing the percentage of the cell population for CD11b, Ly6C^{hi}MΦ, and Ly6C^{lo}MΦ. [No-MI: males (n=4), females (n=4); MI-d1: males (n=5), females (n=6); $p<0.05$ vs male at respective time point; *$p<0.05$ compared to no-MI naïve controls.