Supplement Material

Activation of aryl hydrocarbon receptor induces vascular inflammation and promotes atherosclerosis in ApoE-/- mice

Dalei Wu, Noriko Nishimura, Victoria Kuo, Oliver Fiehn, Sevini Shahbaz, Laura Van Winkle, Fumio Matsumura, and Christoph Vogel

Figure SI. Analysis of AhR and IL-8 mRNA expression in U937 macrophages after gene silencing. Total RNA was prepared 48 h post-transfection with either a scrambled siRNA or a specific siRNA targeted against AhR or IL-8. Level of mRNA expression was analyzed as described in Material and methods for AHR (shaded bars) and IL-8 (striped bars). *, significantly lower than control (p<0.01)

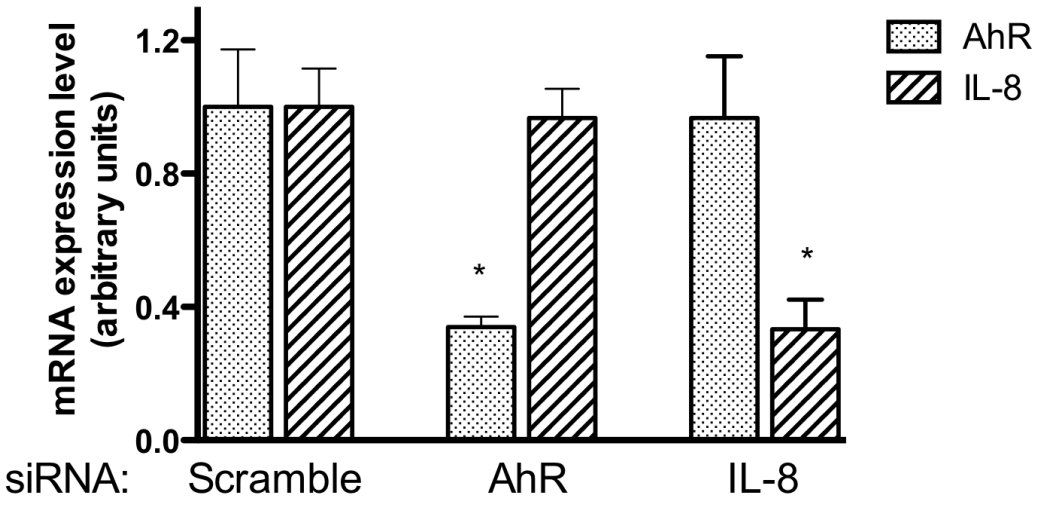

Figure SII. Development of atherosclerotic lesions in ApoE-/- mice fed on regular chow after treatment with TCDD. (A-B) C57BL/6 and (C-D) ApoE-/- mice received (A&C) corn oil (Ctrl) or (B&D) TCDD for 60 days. (E-F) ApoE-/- mice received (E) corn oil or (F) TCDD for 7 months. Shown are representative cross sections from serial sections of aorta arches visualized by H&E staining. (G-H) Expression of foam cell marker MMP-12 in aorta of (G) control and (H) 40-day TCDD treated ApoE-/- mice. Arrows indicate staining of MMP-12.

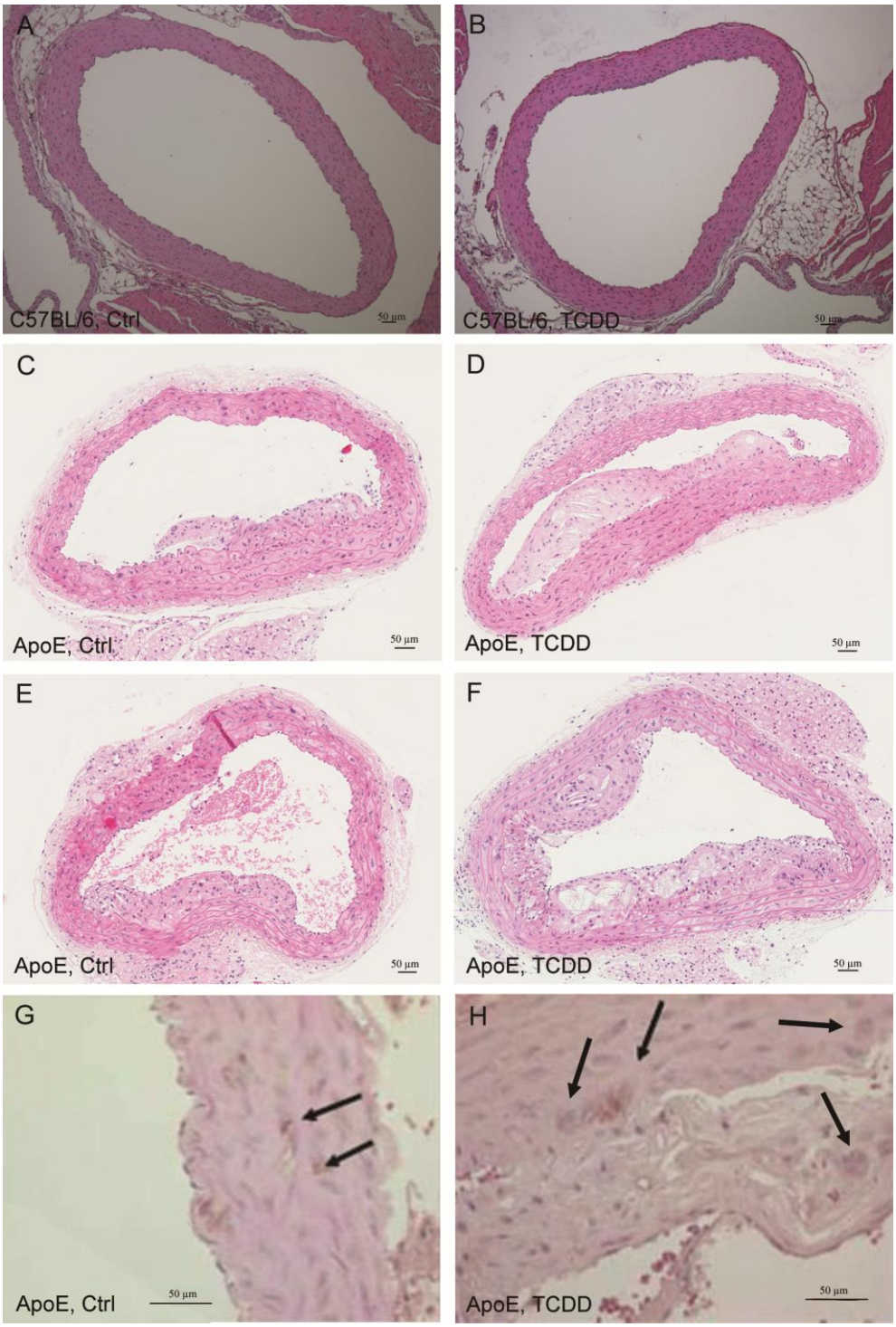

Figure SIII. Development of atherosclerotic lesions in ApoE-/- mice fed a high fat diet. (A-B) ApoE-/- mice received coin oil (Ctrl) or (C-D) a single injection of 15 µg/kg TCDD. Representative images of 8 mice are shown of serial tissue sections of aorta arches prepared 60 days after treatment with TCDD and stained with H&E.

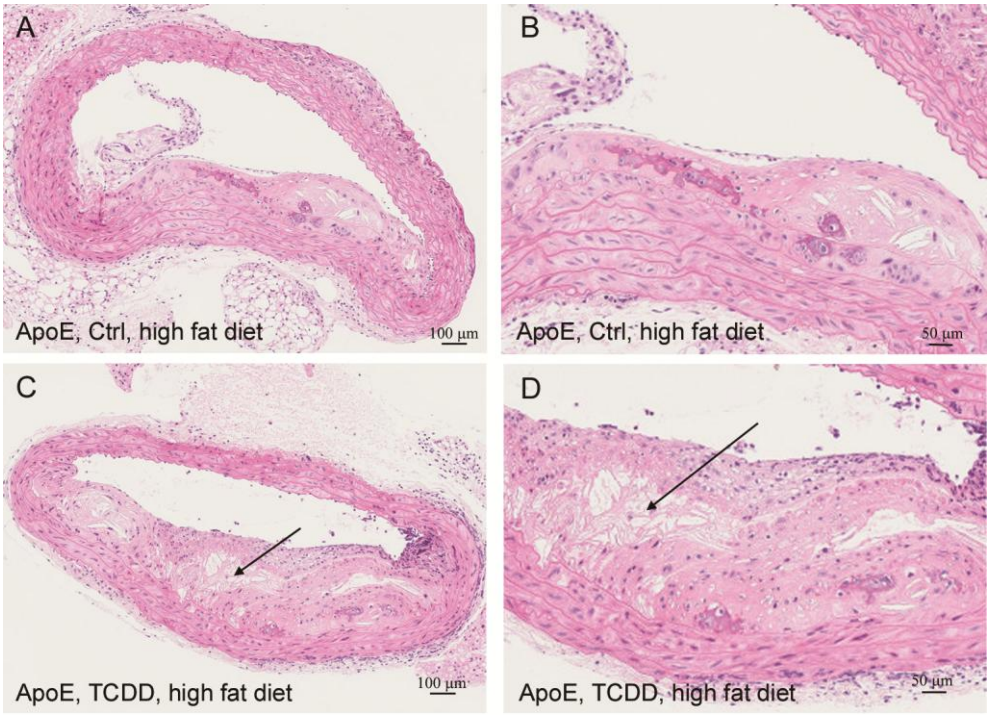

Figure SIV. Inhibition of CXCR2 and AhR decreases plaque formation in ApoE-/- mice. Mice fed regular chow and received (A&E) corn oil (Ctrl) or (B&F) TCDD for 60 days. ApoE-/- mice were treated with (C) SB225002 in absence or (D) presence of TCDD, or treated with (G) CH223191 in absence or (H) presence of TCDD. Serial cross sections of representative aorta arches from 6 mice were visualized by H&E staining. Arrows indicate formation of early atherosclerotic lesions.