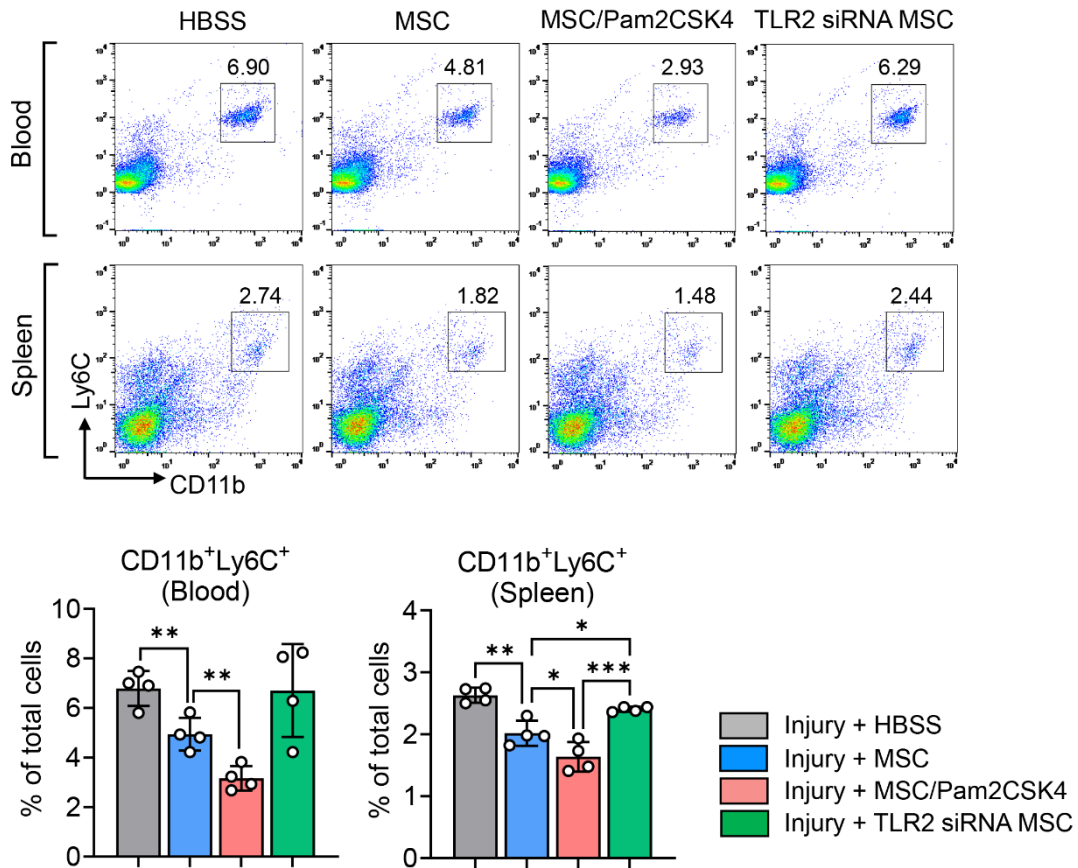


1 **Supplementary figures and figure legends**

2 **Figure S1. Effect of TLR2 signaling in MSCs on the levels of pro-inflammatory**  
3 **monocytes in mice after corneal injury**



5 Representative and quantitative flow cytometric analysis for CD11b<sup>hi</sup>Ly6C<sup>hi</sup> cells in  
6 blood and spleen in BALB/c mice 7 d after corneal suturing injury and treatment with  
7 MSCs, Pam2CSK4-pretreated MSCs, TLR2 siRNA-transfected MSCs or HBSS  
8 (vehicle). \**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001, as analyzed by one-way ANOVA and  
9 Tukey's test

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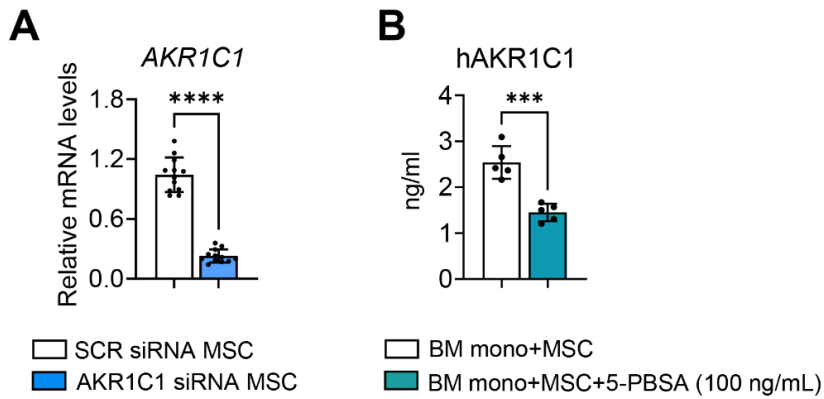
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15 **Figure S2. Validation of AKR1C1 inhibition in MSCs**



17 **A.** qRT-PCR for *AKR1C1* in MSCs transfected with either AKR1C1 siRNA or control  
18 SCR siRNA

19 **B.** ELISA for AKR1C1 in cell-free supernatants of MSC cultures treated with 5-PBSA,  
20 an AKR1C1 inhibitor (100 ng/mL)

21 Data represent means  $\pm$  SD. \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$ , as analyzed by Student's  
22 *t*-test

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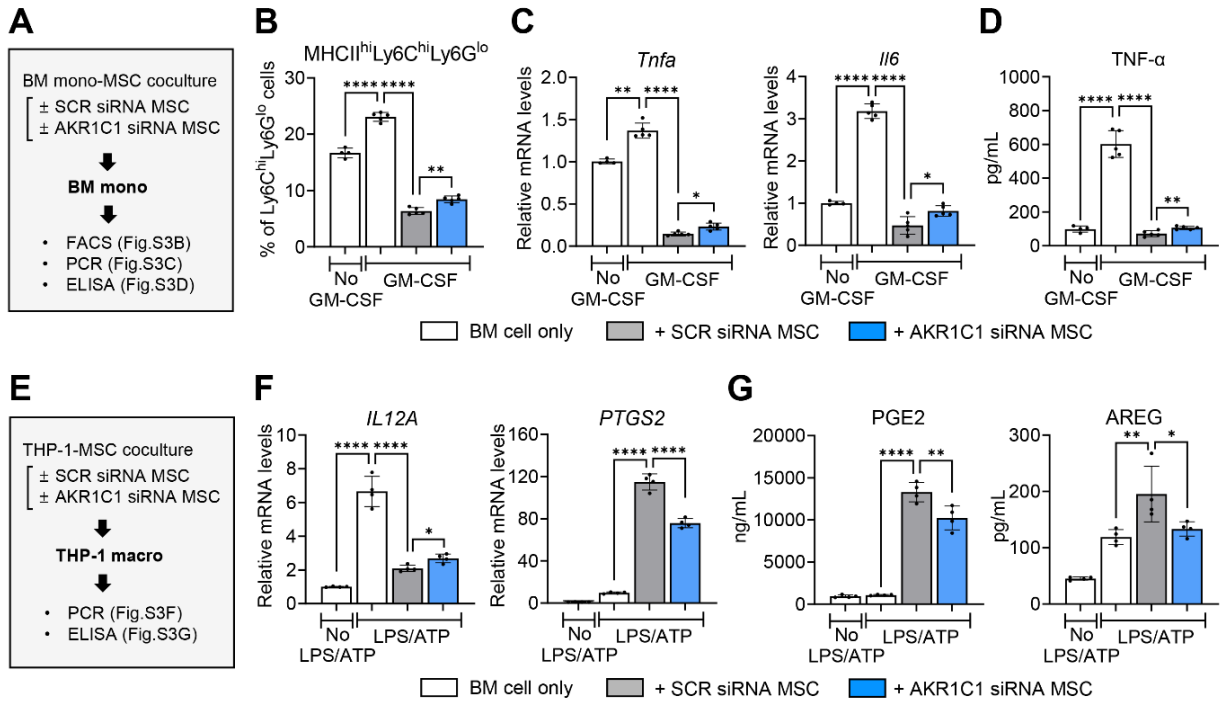
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33 **Figure S3. AKR1C1 in MSCs partly mediates the cells' action on monocytes**  
 34 **and macrophages.**



36 **A.** Experimental scheme. Under GM-CSF stimulation, murine BM cells were  
 37 cocultured with MSCs transfected with either AKR1C1 siRNA or SCR siRNA for 5 d.  
 38 Then BM cells were subjected to assays.

39 **B.** Flow cytometry for MHC class II<sup>hi</sup>Ly6C<sup>hi</sup>Ly6G<sup>lo</sup> cells in BM cells

40 **C.** qRT-PCR for *Tnfa* and *Il6* in BM cells. The mRNA levels are presented relative to  
 41 BM cells without GM-CSF treatment.

42 **D.** ELISA for mouse-specific TNF- $\alpha$  levels in supernatants of cocultures

43 **E.** Experimental scheme. THP-1 macrophages stimulated with LPS/ATP were  
 44 cocultured with AKR1C1 siRNA-transfected or SCR siRNA-transfected MSCs, and  
 45 18 h later, THP-1 macrophages were subjected to assays.

46 **F.** qRT-PCR for *IL12A* and *PTGS2* in THP-1 macrophages. The mRNA levels are  
 47 presented relative to LPS/ATP-unstimulated THP-1 macrophages.

48 **G.** ELISA for PGE2 and AREG levels in culture supernatants

49 Data represent means  $\pm$  SD. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\*\* $p < 0.0001$ , as analyzed by  
 50 one-way ANOVA and Tukey's test, Kruskal-Wallis test and Dunn's multiple-  
 51 comparison test or Student's *t*-test (SCR siRNA-transfected MSC-treated cells vs.  
 52 AKR1C1 siRNA-transfected MSC-treated cells in D, *IL12A* in F)