**Supplementary Table S1.** Primers used for quantitative RT-PCR analysis

| Gene | Sense primers (5'-3') | Antisense primers (3'-5') |
|---|---|---|
| IL-1β | GGATATGGAGCAACAAGTGGTGT | TTTCAACACGCAGGACAGGTA |
| IL-6 | AACAACCTGAACCTTCCAAAGA | TCAAACTCCAAAAGACCAGTGA |
| TNF-α | TGTAGCCCATGTTGTAGCAAAC | TTGAAGAGGACCTGGGAGTAGA |
| IL-10 | GGGAGAACCTGAAGACCCTC | ATAGAGTCGCCACCCTGATG |
| TGF-β | CCCACAACGAAATCTATGACAA | ACGTGCTGCTCCACTTTTAACT |
| CD80 | TGCCTGACCTACTGCTTTGC | AGGGCGTACACTTTCCCTTC |
| CD163 | CCAACAAGATGCTGGAGTGAC | TGACAGCACTTCCACATTCAAG |
| microRNA146a | TTACAGGGCTGGGACAGGC | GGTCCTCAAGCCCACGATG |
| GADPH | AGAACATCATCCCTGCCTCTACT | GATGTCATCATATTTGGCAGGTT |

**Supplementary Table S2.** The concentrations of pro-inflammatory and anti-inflammatory cytokines after high glucose co-culture (pg/mL, mean ± standard deviation)

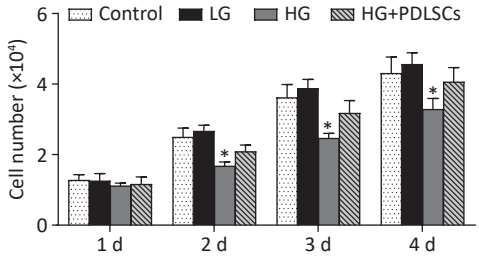
| Groups | IL-1β | IL-6 | TNF-α | IL-10 | TGF-β |
|---|---|---|---|---|---|
| Control group | 748 ± 69 | 191 ± 23 | 103 ± 15 | 336 ± 47 | 533 ± 62 |
| Low glucose | 907 ± 103 | 228 ± 31 | 112 ± 21 | 364 ± 43 | 502 ± 49 |
| High glucose | 3258 ± 243* | 547 ± 62* | 366 ± 38* | 153 ± 21* | 203 ± 33* |
| High glucose+PDLSCs | 1367 ± 106 | 322 ± 41 | 228 ± 23 | 275 ± 31 | 419 ± 49 |

***Note.*** *Means statistically significant compared with other groups of the same item tested ($P < 0.05$).

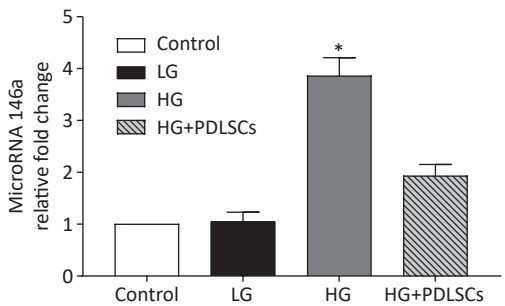
**Supplementary Table S3.** ELISA indicated that microRNA 146a inhibitor reduced the secretion of IL-1β, IL-6, and TNF-α and increased the secretion of IL-10 and TGF-β, and these actions were comparable with the effects of PDLSCs

| Groups | IL-1β | IL-6 | TNF-α | IL-10 | TGF-β |
|---|---|---|---|---|---|
| Control group | 673 ± 78 | 206 ± 18 | 117 ± 21 | 353 ± 38 | 495 ± 55 |
| High glucose | 3309 ± 198 | 483 ± 51 | 344 ± 45 | 128 ± 19 | 227 ± 26 |
| High glucose+transfection of negative control | 3255 ± 243 | 502 ± 44 | 328 ± 39 | 116 ± 22 | 234 ± 32 |
| High glucose+transfection of microRNA 146a inhibitor | 1539 ± 162* | 336 ± 49* | 247 ± 35* | 235 ± 38* | 396 ± 45* |
| High glucose+PDLSCs | 1259 ± 133 | 298 ± 37 | 217 ± 23 | 278 ± 36 | 443 ± 38 |

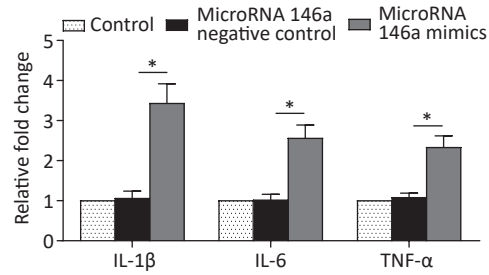
***Note.*** *Means statistically significant compared with the high glucose group of the same item tested ($P < 0.05$).




**Supplementary Figure S1.** Effect of high glucose on macrophage proliferation. High-glucose treatment (30 mmol/L) did not affect the proliferation of macrophages after 1 day of co-culture but significantly suppressed the proliferation of macrophages at 2–4 days. Meanwhile, low-glucose treatment had no effects on macrophages. PDLSCs restored the macrophage proliferation inhibited by high-glucose treatment. Data represent the mean ± SD. *Means statistically significant compared with other groups of the same day ($P < 0.05$). The experiments were repeated three times. Control, macrophage culture alone. LG, macrophages + low glucose; HG, macrophages + high glucose; HG+PDLSCs, macrophages + high glucose + PDLSCs.




**Supplementary Figure S2.** MicroRNA 146a was quantitatively analyzed by RT-PCR, and the data showed that high-glucose treatment up-regulated the level of microRNA 146a. PDLSCs reduced the high-glucose-induced expression of microRNA 146a. *Means statistically significant compared with other groups ($P < 0.05$). The experiments were repeated three times. Control, macrophage culture alone. LG, macrophages + low glucose; HG, macrophages + high glucose; HG+PDLSCs, macrophages + high glucose + PDLSCs.




**Supplementary Figure S3.** Transfection of microRNA 146a promoted the expression levels of pro-inflammatory cytokines, including IL-1β, IL-6, and TNF-α, compared with those in the group of untreated macrophages and group of untreated macrophages + microRNA 146a negative control. *Means statistically significant compared with other groups ($P < 0.05$). The experiments were repeated three times. control, macrophage culture alone. microRNA 146a negative control, macrophages + microRNA 146a negative control. microRNA 146a mimics, macrophages + microRNA 146a mimics.