

**Supplementary Table 11.** Correlation between pro-inflammatory genes and ZIP genes that are differentially expressed in the OA hip clusters. The correlation is also shown for all four pro-inflammatory genes combined. Scatter plots of the correlations are shown in Supplementary Figure 5 and Supplementary Figure 6.

| <b>Pro-inflammatory gene</b> | <b>ZIP gene</b>    | <b>Spearman correlation</b> | <b>p value</b> |
|------------------------------|--------------------|-----------------------------|----------------|
| <b><i>IL1A</i></b>           | <i>ZIP3</i>        | 0.62                        | 0.009          |
|                              | <i>ZIP4</i>        | 0.41                        | 0.1            |
|                              | <i>ZIP7</i>        | 0.56                        | 0.02           |
|                              | <i>ZIP8</i>        | 0.86                        | 0.00003        |
|                              | <i>ZIP11</i>       | 0.64                        | 0.008          |
|                              | <i>ZIP14</i>       | 0.72                        | 0.002          |
|                              | <b><i>IL1B</i></b> | <i>ZIP3</i>                 | 0.22           |
| <i>ZIP4</i>                  |                    | 0.33                        | 0.2            |
| <i>ZIP7</i>                  |                    | 0.53                        | 0.04           |
| <i>ZIP8</i>                  |                    | 0.57                        | 0.02           |
| <i>ZIP11</i>                 |                    | 0.097                       | 0.7            |
| <i>ZIP14</i>                 |                    | 0.37                        | 0.2            |
| <b><i>IL6</i></b>            |                    | <i>ZIP3</i>                 | 0.15           |
|                              | <i>ZIP4</i>        | 0.32                        | 0.2            |
|                              | <i>ZIP7</i>        | 0.43                        | 0.1            |
|                              | <i>ZIP8</i>        | 0.15                        | 0.6            |
|                              | <i>ZIP11</i>       | 0.23                        | 0.4            |
|                              | <i>ZIP14</i>       | 0.26                        | 0.3            |
|                              | <b><i>TNF</i></b>  | <i>ZIP3</i>                 | 0.84           |
| <i>ZIP4</i>                  |                    | 0.63                        | 0.008          |
| <i>ZIP7</i>                  |                    | 0.26                        | 0.3            |
| <i>ZIP8</i>                  |                    | 0.66                        | 0.005          |
| <i>ZIP11</i>                 |                    | 0.63                        | 0.009          |
| <i>ZIP14</i>                 |                    | 0.77                        | 0.0005         |
| <b>Combined</b>              |                    | <i>ZIP3</i>                 | 0.87           |
|                              | <i>ZIP4</i>        | 0.69                        | 0.0031         |
|                              | <i>ZIP7</i>        | 0.40                        | 0.1            |
|                              | <i>ZIP8</i>        | 0.73                        | 0.001          |
|                              | <i>ZIP11</i>       | 0.60                        | 0.01           |
|                              | <i>ZIP14</i>       | 0.78                        | 0.0003         |