Supplemental Material

Dual and Opposing Regulation of MMP1 and MMP13 by Both Arms of miR-675 in Human Articular Chondrocytes

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Supplementary Table S1. Relative expression levels of several members of the MMP family, representing the collagenase, stromelysin, gelatinase and Membrane-bound MMP categories. Levels are shown in human articular chondrocytes at P2 isolated from three different donors after SYBR qPCR relative to the housekeeping gene RPLP0 using the ΔC<sub>t</sub> method and displayed ± stdev. Levels > 0.0005 were considered significant in expression and are shaded in grey. M.B., membrane-bound. Following primers were used: RPLP0-FWD, CCATTGAAATCCTGAGTGATGTG; RPLP0-REV, CTTCGCTGGCTCCCACTTT; MMP primer sequences are listed in the two right most columns.

<table>
<thead>
<tr>
<th>MMP</th>
<th>Family</th>
<th>Relative expression</th>
<th>Primer fwd</th>
<th>Primer rev</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Collagenase</td>
<td>0.073753 ± 0.043</td>
<td>CCAGGTATTGGAGGGGATGC</td>
<td>GTCAAGAGAAATGGGCGAGT</td>
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<tr>
<td>2</td>
<td>Gelatinase</td>
<td>0.081308 ± 0.048</td>
<td>GGTTCATTGGCAGGACTGTG</td>
<td>GGCCTCGTACCTCGCATCAA</td>
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<tr>
<td>3</td>
<td>Stromelysin</td>
<td>0.138509 ± 0.0934</td>
<td>CACAGACCTGACTCGTTCC</td>
<td>GAGTCAGGGGGAGGTCCATA</td>
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<tr>
<td>8</td>
<td>Collagenase</td>
<td>6.89E-05 ± 0.0001</td>
<td>CCATGTGCAGATTTCCAAGGC</td>
<td>AGACTGATACTGGTTGCTTGGT</td>
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<tr>
<td>9</td>
<td>Gelatinase</td>
<td>5.31E-05 ± 0.0002</td>
<td>CGACGTCTTCAGTACCGAG</td>
<td>CTGGTTCAACTCCTCGCGGG</td>
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<tr>
<td>10</td>
<td>Stromelysin</td>
<td>6.3E-05 ± 0.0001</td>
<td>ACAGCAGGGACAGCCTTTTT</td>
<td>GAGAGAAAACCAGGGGTATGG</td>
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<tr>
<td>11</td>
<td>Stromelysin</td>
<td>0.000344 ± 0.0002</td>
<td>TCATGATCGACTTCGCGCAGG</td>
<td>TCCCTTCTCGGTAGTTCT</td>
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<tr>
<td>12</td>
<td>Stromelysin</td>
<td>1.38E-05 ± 0.00003</td>
<td>ATCTGGCATTGGAGGGGATG</td>
<td>TGCCCAATCTCGTGAACACG</td>
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<td>13</td>
<td>Collagenase</td>
<td>0.061612 ± 0.047</td>
<td>AGACTTCCCAGGAATTGGTGAG</td>
<td>ACGGTCTACTCCAGATGCTG</td>
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<tr>
<td>14</td>
<td>M.B. MMP</td>
<td>0.047177 ± 0.0298</td>
<td>CCAACACATCTGTGACGAGGAA</td>
<td>TTGGTTATCCCTCACCGGCC</td>
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<td>15</td>
<td>M.B. MMP</td>
<td>0.000282 ± 0.0002</td>
<td>CTTTCGTGACATGACGCA</td>
<td>AGGCCGCTATTGTCGAAATTT</td>
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<td>16</td>
<td>M.B. MMP</td>
<td>0.0002824 ± 0.0015</td>
<td>GCATCACGCTGAGGGGTGTTT</td>
<td>GTGGGAAGGTAGCCGTACTT</td>
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<td>17</td>
<td>M.B. MMP</td>
<td>4.54E-05 ± 0.00001</td>
<td>CCCCACACCAATGGGAAACAGA</td>
<td>AGGGCGTAGATACAGTGGATG</td>
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</tbody>
</table>
Supplementary Figure S2
Legend to Supplementary Figures S1 and S2.

**Supplementary Figure S1.** Expression levels of six MMPs after overexpression of mimic miR-675-5’ and mimic miR-675-3’ in human articular chondrocytes from three donors. Transfection was carried out as described in Materials and Methods and expression levels were analysed relative to RPLP0 using the ΔCt method. The table lists p values of paired t-tests relative to either the negative control mimic or to the unrelated miR let-7e. NC, negative control miR mimic.

**Supplementary Figure S2.** Levels of miR-675-5’ and miR-675-3’ using mimics in human articular chondrocytes from seven donors at passage 2 48 hrs after overexpression. Data are shown after TaqMan qPCR relative to the small housekeeping RNA RNU24 and evaluated using the ΔCt method. NC, negative control mimic.