

Table S1. PCR primers.

Human EF1 α	Forward: 5'- CCTGTGGAAATTTGAGACC -3' Reverse: 5'- CCATTTTGTTAACACCGACA -3'
Human ADAMTS5	Forward: 5'- TCAAAGCCAAAGACCAGACT -3' Reverse: 5'- ATTCCTTCGTGGCAGAGTA -3'
Human Aggrecan	Forward: 5'- GAAAGGCATCGTGTTCCATT -3' Reverse: 5'- ACGTCCTCACACCAGGAAAC -3'
Human BMPR1a	Forward: 5'- CAGGTTCCCTGGACTCAGCTC -3' Reverse: 5'- CTTTCCTTGGGTGCCATAAA -3'
Human BMPR1b	Forward: 5'- AAAGGTCGCTATGGGGAAGT -3' Reverse: 5'- GCAGCAATGAAACCCAAAAT -3'
Human BMPR2	Forward: 5'- GCTAAAATTTGGCAGCAAGC -3' Reverse: 5'- CTTGGGCCCTATGTGTCACT -3'
Human Collagen 1	Forward: 5'- AAAGGATCTCCTGGTGAAGC -3' Reverse: 5'- CACCTTTAGGTCCAGGGAAT -3'
Human Collagen 2	Forward: 5'- CCTGAGTGGAAGAGTGGAGA -3' Reverse: 5'- TCCATAGCTGAAATGGAAGC -3'
Human MMP13	Forward: 5'- CCAACCCTAAACATCCAAAAAC -3' Reverse: 5'- AAAAACAGCTCCGCATCAAC -3'

Figure S1. Human OA chondrocytes from five donors were cultured six days in monolayer at 340, 380, 420 and 480 mOsm. The cell viability was evaluated. Data on the graph represent the mean +/- standard error of the mean of technical replicates (n=3-6). Statistical analysis was performed for each donor separately (* means significantly different from 340 mOsm with p<0.05) and for all donors together, with the means, standard errors of the mean (SE) and P values for the comparison to 340 mOsm shown in the table.

Cell viability

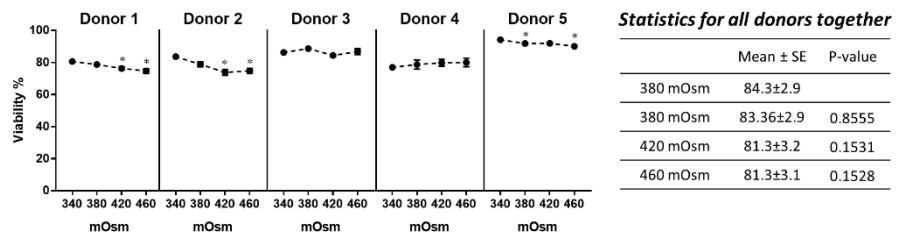


Figure S2. Human OA chondrocytes from two donors were cultured six days in monolayer at 340, 380, 420 and 480 mOsm and (osmolarity was adjusted with sucrose). The GAG release as well as IL1 β , IL6 and TNF α concentrations were measured in the medium. Cell samples were used to evaluate the cell concentration, cell viability and gene expression of aggrecan, type II and I collagen, ADAMTS5, MMP13 and BMPR1a, 1b and 2 by RT-qPCR. Data represent the mean of technical replicates (n=3-6). * means significantly different from 340 mOsm with p<0.05,

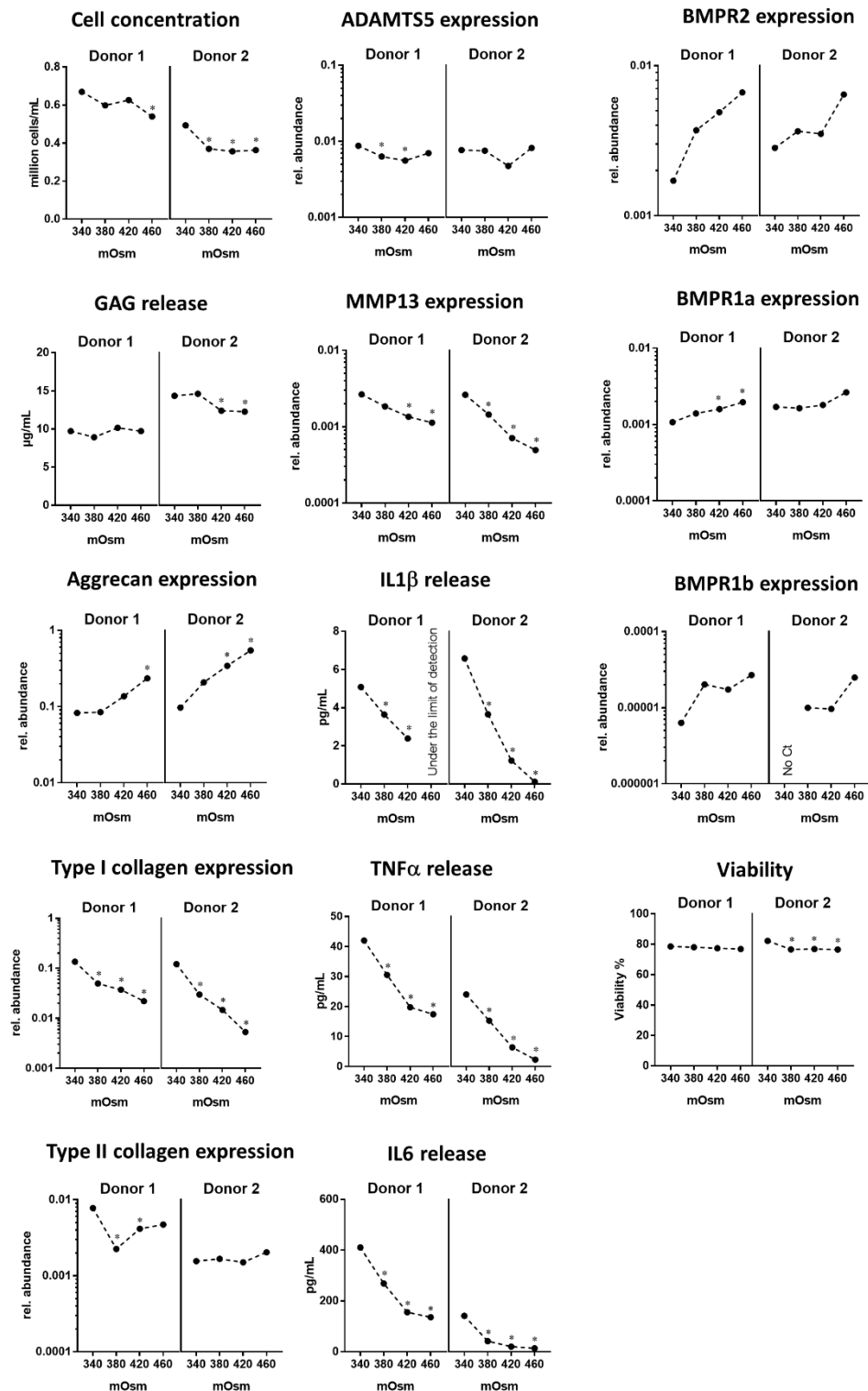


Figure S3. Human OA chondrocytes from five donors were cultured six days in monolayer at 340, 380, 420 and 480 mOsm. The gene expression of BMPR1a, 1b and 2 was evaluated by RT-qPCR. Data on the graphs represent the mean of technical replicates (n=3-6). The level of expression in FIC is shown with a dotted line. Statistical analysis was performed for each donor separately (*means statistically different from 340 mOsm with $p < 0.05$) and for all donors together, with the means, standard errors of the mean (SE) and P values for the comparison to 340 mOsm shown in the table.

