**Supplementary Table S1.** Assessment of human chondrocytes (passage 4) after chondrogenic differentiation for 28 d with continuous statin treatment for 28 d. Results of individual categories given as mean ± standard deviation; n = 3. Basal= chondrocyte culture medium (10% FCS); CDM= chondrogenic differentiation medium; Sim= simvastatin; Flu= fluvastatin.

| Approach     | Diameter   | Collagen II | Proteoglycan (Safranin O) | Matrix produced | Cell morphology |
|--------------|------------|-------------|----------------------------|-----------------|-----------------|
| Basal        | 0.33 ± 0.58| 0.0         | 0.33 ± 0.58                | 0.33 ± 0.58     | 0.42 ± 0.49     |
| CDM          | 2.17 ± 0.29| 3.33 ± 0.58 | 3.83 ± 0.29                | 3.42 ± 0.49     | 2.92 ± 1.02     |
| Sim 1 µM     | 0.83 ± 0.29| 1.5 ± 0.87  | 0.5 ± 0.87                 | 0.83 ± 0.82     | 0.42 ± 0.49     |
| Sim 10 µM    | 0.33 ± 0.58| 0.0         | 0.0                        | 0.0             | 0.0             |
| Flu 1 µM     | 0.0         | 0.67 ± 1.16 | 0.0                        | 0.17 ± 0.41     | 0.0             |
| Flu 10 µM    | 0.67 ± 0.58| 0.0         | 0.0                        | 0.33 ± 0.52     | 0.0             |

**Supplementary Table S2.** Assessment of human chondrocytes (passage 4) after chondrogenic differentiation for 28 d with short-term statin treatment for 7 d. Results of individual categories given as mean ± standard deviation; n = 6. Basal= chondrocyte culture medium (10% FCS); CDM= chondrogenic differentiation medium; Sim= simvastatin; Flu= fluvastatin.

| Approach     | Diameter   | Collagen II | Proteoglycan (Safranin O) | Matrix produced | Cell morphology |
|--------------|------------|-------------|----------------------------|-----------------|-----------------|
| Basal        | 0.0        | 0.63 ± 0.49 | 0.25 ± 0.42                | 0.0             | 0.0             |
| CDM          | 1.00 ± 0.71| 3.80 ± 0.27 | 2.80 ± 0.91                | 2.15 ± 0.49     | 2.20 ± 0.48     |
| Sim 1 µM     | 1.50 ± 0.55| 3.50 ± 1.00 | 3.50 ± 0.55                | 2.54 ± 0.60     | 2.08 ± 0.75     |
| Sim 10 µM    | 0.67 ± 0.52| 2.75 ± 0.82 | 1.04 ± 1.01                | 0.92 ± 0.79     | 0.46 ± 0.78     |
| Flu 1 µM     | 1.17 ± 0.41| 3.38 ± 0.70 | 2.75 ± 0.99                | 2.42 ± 0.26     | 2.04 ± 0.60     |
| Flu 10 µM    | 0.50 ± 0.55| 2.29 ± 1.19 | 1.29 ± 1.68                | 1.17 ± 0.75     | 0.75 ± 0.76     |

**Supplementary Figure S3.** Exemplary images of TUNEL staining after chondrogenic differentiation (28 d). Chondrocytes were differentiated under short-term (7 d) or continuous (28 d) statin treatment. Basal= chondrocyte culture medium (10% FCS), negative control; CDM= chondrogenic differentiation medium, positive control; Sim= simvastatin; Flu= fluvastatin.