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## Data Article

# Cytokine data obtained from synovial stromal cells of patients with rheumatoid arthritis or osteoarthritis



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## ABSTRACT

In this article, we share the raw cytokine data obtained from basal and stimulated synovial stromal cells cultured from patients with rheumatoid arthritis or osteoarthritis. This data article is related to the research article entitled “1,25D<sub>3</sub> and calcipotriol, its hypocalcemic analog, exert a long-lasting anti-inflammatory and anti-proliferative effect in synoviocytes cultured from patients with rheumatoid arthritis and osteoarthritis (1). Cytokine levels were analyzed by a magnetic bead-based multiplex assay (a panel of 27 important cytokines) in two separate sets of experiments. The first was conducted with IL-1 $\beta$  and 1,25(OH)<sub>2</sub>D<sub>3</sub> and the other with TNF $\alpha$ , calcipotriol, i.e. the hypocalcemic analog 1,25(OH)<sub>2</sub>D<sub>3</sub>, and dexamethasone. The raw data of this article display the individual variation in basal secretion of cytokines and in their response to different stimuli.

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### Specifications table

Subject area	Translational science
More specific subject area	Inflammation in the synovium of rheumatoid arthritis and osteoarthritis patients
Type of data	Tables, text
How data was acquired	Cytokines were measured by the Luminex MagPix Instrument and Luminex xPotent Software and Bio-Rad Bio-Plex Pro Human Cytokine Grp I Panel (27-plex) PGE <sub>2</sub> data is produced by ELISA (Thermo Scientific, USA)
Data format	raw cytokine data
Experimental factors	Basal and exposed samples from the cell culture media were collected and analyzed for cytokines.
Experimental features	Cytokine levels were analyzed by a magnetic bead-based multiplex assay (a panel of 27 important cytokines) after a 48-h treatment with different stimuli
Data source location	Oulu, Finland, 65°01'N, 025°28'E
Data accessibility	Data is with this article

### Value of the data

- The raw cytokine data in this article reveal the natural variation of cytokine levels in cultured synovial stromal cells obtained from patients with rheumatoid arthritis or osteoarthritis.
- This data shows absolute cytokine levels in baseline and stimulated states (stimulated with TNF- $\alpha$  or IL-1 $\beta$ ) and when treated with anti-inflammatory factors [1,25(OH)<sub>2</sub>D<sub>3</sub>, calcipotriol or dexamethasone].
- By examining the individual responses to different stimuli, it is possible to evaluate the individual and overall significance of different cytokines in the synovial pathology of rheumatoid arthritis and osteoarthritis. This kind of data can help to identify the most important cytokines for further analysis by other research groups.

## 1. Data

See [Tables 1](#) and [2](#).

**Table 1**

Basal and stimulated levels of cytokines (pg/ml) after a 48-h exposure with IL-1 $\beta$  (10 ng/ml) and 1,25 (OH)<sub>2</sub>D<sub>3</sub> (10 nM). The apparent level of IL-1 $\beta$  was mostly attributable to the added IL-1 $\beta$ . Data comprises cell cultures from four patients with osteoarthritis (OA) and four with rheumatoid arthritis (RA). Cytokines have been analyzed in two separate runs which explains the slight difference in the lower detection limit. The final data is presented in Fig. 8 of the research article [\[1\]](#).

Cytokine	Patient	IL-1 $\beta$	IL-1 $\beta$ + 1.25 (OH) <sub>2</sub> D <sub>3</sub>
MIP-1 $\beta$	OA	27.5	20.7
	OA	136.7	114.21
	OA	44.2	21.1
	OA	25.3	16.3
	RA	33.21	28.61
	RA	48.6	42
	RA	74.82	92.9
	RA	< 14.7	< 14.7

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