CD14, CD15, CD33, CD19, CD11a, CD11b, CD11c, CD28, CD54. Cryostat sections were stained with horseradish peroxidase or phosphatase alkaline labeled second antibodies and analyzed by light microscopy and image analysis. Single cell suspensions obtained by enzymatic dissociation were analyzed by flow cytometry including FITC- or PE-labeled mAbs. Cell populations in the synovial membrane were diagnosed by negative selection according to cell morphology and distribution of the receptors.

Synovial membrane contains as predominant populations synoviocytes type A (macrophage-like), synoviocytes type B (fibroblast-like) and T-helper lymphocytes. There are B lymphocytes, plasmocytes and dermic cells in variable proportion. A few CD8+ lymphocytes and granulocytes are also present. HLA-DR is present on the most of the cells surface, its frequency depending on the type of the cells and the activation state. A very low number of cells in normal synovial portions. A few CD8+ lymphocytes and granulocytes are also present. HLA-DR both on the activated lymphocytes and on antigen presenting cells, showing the close relativity of these cells in antigen presentation and activation process.

The frequency of cells types and the proportion of the activation and adherence markers per cell and per sample are in correlation with synovial membrane architecture and with the clinical status of the patient. The overlap of immunohistological and flow cytometric analyses gives a good image of activated immunological status and could reveal the response in focused immunotherapy. The serum concentrations of COMP were determined 6, 35 and 49 days after pristane injection by enzyme-linked immunosorbent assay using a polyclonal antiserum raised against rat COMP. Results: (DaXe3) F2 rats developed arthritis with a variable disease course. Elevated COMP levels were seen in arthritic rats from 12 days after arthritis onset. The concentration of COMP correlated with the arthritis score both day 35 (R = 0.95) and 49 (R = 0.90). High levels of COMP were only seen in rats with an active chronic disease course, whereas the COMP concentration in rats that later recovered, remained low.

In conclusion, the serum concentrations of COMP represents a new means of quantifying the severity of arthritis. High levels of COMP may indicate a subsequent chronic disease course.