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### Abstract:

**AIM OF THIS STUDY:** Chinese herbal pill Yi Shen Juan Bi (YJB), which is a compound herbal drug, has traditionally been used as an anti-rheumatic drug in Chinese local clinics. Thus, we investigate the therapeutic effect of the YJB in rheumatoid arthritis (RA), using Freund's complete adjuvant arthritis (AA) in rat model.

### METHODS:

For that purpose, macrophage derived cytokine tumor necrosis factor alpha (TNF- $\alpha$ ) and interleukin-1 (IL-1) were measured in ex vivo bone marrow immunosorbent assay (ELISA). We also assessed the effect of YJB on peritoneal macrophage derived nitric oxide (NO) in ex vivo Griess reaction. Prostaglandin E (PGE) in metaphes was assessed by ultraviolet spectrophotometer method. Further, Bax level was examined by western blot analysis.

### RESULTS:

YJB significantly decreased the production of peritoneal macrophages derived TNF- $\alpha$ , IL-1 and NO. YJB also significantly decreased prostaglandin E (PGE) and upregulated the Bax expression in AA rat's serum.

### CONCLUSION:

YJB is a potential anti-rheumatic agent targeting the inflammatory and immunomodulator response of macrophages while down regulating the PGE and up-regulating the pro-apoptotic Bax expression. Such characteristics of YJB on AA may be advantageous to the treatment of clinical rheumatoid arthritis.

**Keywords:** Yi ShenJuanBi; NO; TNF- $\alpha$ ; IL-1; PGE; Bax