

## Effects of Mycoplasmal Antigens on Production of Transforming Growth Factor- $\beta$ 1 in Human Tumor Cells

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Transforming growth factor- $\beta$  (TGF- $\beta$ ) is a immunosuppressive cytokine that is produced by neoplastic and normal cells. In this study we have investigated the effect of Mycoplasmas lysates, lipopolysaccharide (LPS), and *Staphylococcus enterotoxin B* (SEB) on production of TGF- $\beta$ 1 by human tumor cell lines.

Cultured human tumor cell lines were incubated with Mycoplasmal lysates (*Ureaplasma urealyticum*, Uu; *Mycoplasma hominis*, Mh) LPS, or SEB. Culture supernatants that were collected at 24, 48, and 72 hr were assessed for TGF- $\beta$ 1 by enzyme-linked immunosorbent assay.

A significant increase in TGF- $\beta$ 1 production was measured in culture supernatants of K-562 (24, 72 hrs), Raji (24, 48 hrs), RPMI 2650 (24, 72

hrs), HEC-1-B (24, 48, 72 hrs) cells treated with LPS, K-562 (24, 72 hrs), Raji (48 hrs), RPMI 2650 (72 hrs), HEC-1-B (24, 48, 72 hrs) cells treated with SEB, Raji (48 hrs), RPMI 2650 (48, 72 hrs), and HEC-1-B (24, 48, 72 hrs) cells treated with Uu, and K-562 (24, 72 hrs), Raji (48 hrs), RPMI 2650 (48, 72 hrs), HEC-1-B (24, 48, 72 hrs) cells treated with Mh.

Therefore, production of TGF- $\beta$ 1 by human tumor cells shows the variance of quantities released according to kinds of stimulants and exposure times. These results suggest that the quantitative change of TGF- $\beta$ 1 in tumor cells by exposure with bacterial products such as mycoplasmal lysates, LPS, and SEB may effect in growth and propagation of tumors at a different immune condition.