[Microbiol. Immunol., 38, 983-988 (1994)] [Lab. of Pharmacology]

Mechanism for macrophage activation against *Corynebacterium parvum*: participation of T cells and its lymphokines.

HIROSHI MORI, MASAHIKO MIHARA, YUKI UESUGI, HIROICHIi NAGAI*, AKIHIDE KODA

Participation of T cells in the activation of macrophages by *C. parvum* was examined. TNF production in vitro from the spleen cells of BALB/c-+/+ mice was abrogated completely by the pre-treatment of spleen cells with anti-Ia antiserum and complement. TNF production was not elicited at all in BALB/c-nu/nu mice. Supernatant from a culture of spleen cells stimulated with phytohemagglutinin-P (a PHA-induced lymphokine) made it possible for BALB/c-nu/nu mice to produce TNF, associated with an induction of Lyt-1^+ cells and Lyt-2^+ cells. These results suggest that increasing the number of Ia^+ cells is not sufficient to bring about TNF production, and that Ia^+ cells must also be stimulated by T cells or T-cell lymphokines in order to produce TNF.

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Lymphocyte stimulation test with tetrazolium-based colorimetric assay for diagnosis of drug-induced allergic hepatitis.

TOMOAKI YOSHIMURA, CHIKAKO KURITA, FUTOSHI YAMAZAKI, SATOSHI NAKANO, HIROICHI NAGAI*

We examined the usefulness of 3-(4,5-dimethyl thiazol-2-yl)-2,5-diphenyl tetrazolium bromide (MTT) as a marker for the lymphocyte stimulation test (LST) in diagnosing drug allergy. A clinical study was made of 133 patients with diagnosed drug-induced allergic hepatitis. Among the causative drugs, antimicrobial agents were the most numerous accounting for 33.9 % of the total, followed by central nervous system agents 21.2 %, and cardiovascular agents 16.9 %. The MTT assay would be useful in diagnosing drug-induced allergic hepatitis, and among the drugs examined, antimicrobial agents were responsible for the largest number of allergic reactions.

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Principle of the bark of *Phellodendron amurense* to suppress the cellular immune response.

HIROSHI MORI, MASAHIRO FUCHIGAMI, NAOKI INOUE, HIROICHI NAGAI*, AKIHIDE KODA, ITSUO NISHIOKA

OB-1 and OB-5, quaternary base alkaloids known as magnoflorine and phellodendrine, respectively, were isolated from Phellodendri Cortex as biologically active principles to suppress local graft-versus-host (GvH) reactions in mice. They suppressed the local GvH reaction, when given i.p. to the host mice at 5-20 mg/kg for 8 consecutive days from the day of spleen cell transfer. They also suppressed picryl chloride-induced delayed type hypersensitivity when given i.p. to mice at 10 and 20 mg/kg for 5 consecutive days from the day of the sensitization. These results suggest that OB-1 and OB-5 suppress the induction phase of the cellular immune response.