

Study on Toxicity Evaluation of Dioxin Related Compounds

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Summary

PCDDs/PCDFs mixture in the environment suppressed the function of B-cells relating to IgM antibody production and that of T-cell relating to IgG antibody production in the humoral immune system of mice. Moreover, the number of helper T-cells, also decreased.

The dose-response-relation for the anti-DNP-IgM response using *in vivo* assay by 2,3,7,8-TCDD showed linear relation between 100ng - 3000ng.

Each PCDDs/PCDFs mixture was tried to evaluate its toxicity *in vivo*. As the result, immune toxicity (2,3,7,8-TCDD toxicity equivalent; TEQ) of each PCDDs/PCDFs mixture was in general higher than the value calculated with an international toxicity equivalency factor (I-TEF). In the PCDDs/PCDFs of the same TEQ, when PCDDs/PCDFs of low toxicity (non-2,3,7,8-substituted PCDDs/PCDFs) is contained in larger amount, the result of toxicity evaluation by *in vivo* assay showed a tendency to decrease.