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Recent alternative strategies in dermato-toxicology about cosmetic raw materials approved in OECD

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Recent, a problem about an animal-experimentation were seriously stated with bright development of human science. Safety of chemical materials is evaluated on the basis of the various toxicity data that used an animal-experimentation.

However, an toxicity test used by animal is covered with limit and criticism. A problem of toxicity test by animal can try to approach in ethic a few side and usefulness.

We can't perfectly forecast revelation of the toxicity of a human by an animal experimentation. And, There can be no doubt that animal toxicity experiments cause a great deal of suffering in the research and development expenditures. This situations devise motivation about alternative non-animal test naturally.

A toxicity test of the cosmetics material is more asked alternative non-animal test rather than drug. In the case of Europe, marketing on cosmetics which carried out the toxicity test used an animal is prohibited from 2005. This ambience is spreading throughout the world.

The principle aim of this lecture is to summarize the current status of alternative tests in contributing to the assessments of the dermato-toxicological effect of cosmetic raw materials approved in OECD(Organizationfor Economic Cooperation and Development). Among these tests, assessments of phototoxicity test using mouse(Balb/c mouse) 3T3 cell line, skin corrosion test using artificial skin cell and skin sensitizing test using local lymph node assay will be explain. Especially, they tests based on a 3R(Replacement, Reduction, Refinement) conceptions of alternative non-animal test compare with the existing animal test will be explain.