PROTOCOL FOR

SKIN PAINTING TESTS ON MICE

Purpose: To test compounds for potential toxicity (local and systemic), particularly potential carcinogenesis, when applied repeatedly to the skin of mice.

Type of Mouse Used: Female Swiss White

Starting Day: After the arrival in the laboratory the mice (weanlings) are observed for two weeks, then application of the compound is started.

Housing: The mice are housed with ten animals per cage. Water is supplied in bottles with stainless steel drinking tubes. Food (Laboratory Chow) is supplied ad libitum.

Removal of Hair: The hair is removed from the back of each mouse with an electric clipper. Hair is removed before application of the compound is started and is kept off the area throughout the duration of the test. The frequency of removal of hair depends upon the mouse, the compound, etc., but is usually once per week or once every two weeks.

Dose of Material per Application: 15 mg/mouse (if tolerated)

Frequency of Application: Three times weekly throughout the life span of a mouse (usually 80 weeks to have a maximum number of survivors for pathology).

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Site of Application: The back

Method of Application: Applied with a brush or other suitable device. A separate brush is used for each compound. The amount is determined by weight for each compound before application is started.

Number of Mice per Group: 100 per group

Observations: The animals are observed daily (five days per week). Any change in the behavior of the mouse or on the skin of the mouse is recorded.

Records: A separate record sheet is kept on each mouse. This sheet contains the pertinent dates (starting, changes in skin, etc.), the dose, total number of doses, total quantity applied, record of first lesion, comments, etc. (A sample sheet is attached.) Daily records of each group of mice are kept. A monthly record of each group of mice also is kept.

Tumors: A suspected papilloma is recorded on the monthly data sheet only after it reaches one mm in diameter. All tumors are sectioned and examined histologically. The diagnosis is made only after histological examination.

Gross Pathology: An autopsy is performed on all animals. Skin, internal organs and carcass are fixed in buffered formalin.

Examination of Skin and Organs: The skin of all mice is fixed, sectioned, stained and examined microscopically for pathology. Organs are grouped by standard procedures (usually three blocks per animal), sectioned and stained with hematoxylin and eosin.

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Reports: Throughout the experiment a quarterly report for each group is prepared.

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RESULTS OF MOUSE SKIN-PAINTING TEST

Compound Applied: _____

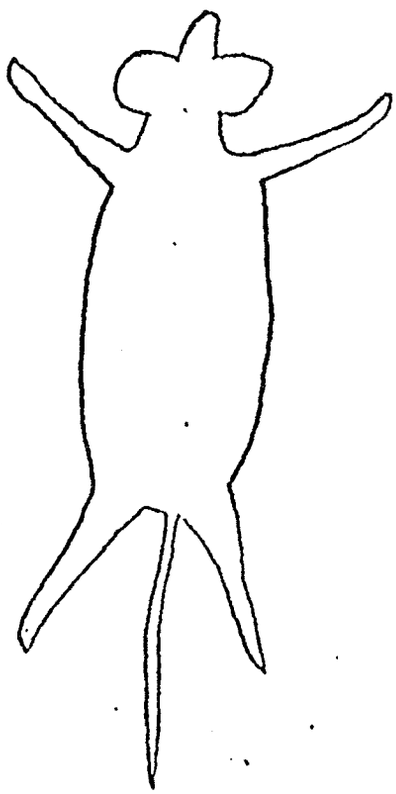
Mouse No.: _____

Strain: _____ Sex: _____

Date: Expt. Started: _____
Expt. Completed: _____
Mouse Killed, Died, Found Dead: _____

Individual Dose: _____ mg
Applied: Mon. - Tue. - Wed. - Thur. - Fri.
Total Number of Doses: _____
Total Quantity Applied: _____ gram
First Lesion Appeared after _____ Doses
First Lesion Appeared after _____ Days
First Lesion Appeared after Application of _____ gram

COMMENTS



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