Ethics Review of Fischer et. al Dermal Exposure Study

Michelle Arling
Office of Pesticide Programs
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Outline

- Subject selection
- Consent process
- Risks and risk minimization
- Respect for subjects
- Independent ethics review
- Substantive acceptance standards
- Findings and conclusion

Subject Selection

- Subjects – 433 participants
  - Group 1 – 9 individuals (3 f, 6 m); healthy
  - Group 2 – 25 individuals; formaldehyde-sensitive
  - Group 3 – 120 individuals; contact dermatitis
  - Group 4 – 24 individuals; formaldehyde-sensitive
  - Group 5 – 255 individuals (159 f, 96 m); contact dermatitis

- Eligibility
  - “healthy volunteers without known sensitivity to formaldehyde, consecutive patients with contact dermatitis, and patients with previous patch tests to formaldehyde”

Consent Process

- All subjects gave written consent to participate

Risks and Risk Minimization

- Risks
  - Known skin irritant, and exposure may cause irritation or dermatitis
- Minimization
  - Conducted at a dermatology clinics under the supervision of medical professionals
  - Concentrations used in the study are in line with the concentration of formaldehyde used in diagnostic patch testing (1-2%, or 10,000-20,000 ppm)
  - Other substances did not show dermal irritation or allergic reactions in animal studies

Respect for Subjects

- Subjects were not identified in the publication

Independent Ethics Review

- The research was approved by the relevant ethical committees based on where the research was conducted
- No records related to this research are available

Substantive Acceptance Standards

- 40 CFR §26.1703
  - Prohibits reliance on data involving intentional exposure of pregnant or nursing women or of children
- 40 CFR §26.1704
  - Prohibits EPA reliance on data if there is clear and convincing evidence that:
  - (1) Conduct of the research was fundamentally unethical; or
  - (2) Conduct of research was deficient relative to the ethical standards prevailing at the time the research was conducted in a way that placed participants at increased risk of harm or impaired their informed consent

Prevailing Ethical Standards

- Declaration of Helsinki (1989)
  - Research must be scientifically sound and conducted by qualified personnel
  - The research should have a clear purpose and protocol, reviewed and approved by an independent ethics committee
  - The importance of the study's objective must outweigh the inherent risks to subjects, and measures to minimize risks must be implemented
  - The privacy of subjects and confidentiality of their personal information must be respected
  - Participants should give prior, informed, voluntary consent and have the freedom to withdraw from the study

Findings

- All subjects were adults; no evidence that any female subjects were pregnant or nursing
- No evidence that research was fundamentally unethical or deficient to ethical standards in place when the research was conducted
  - Subjects consented to participate
  - Doses were in line with doses used in clinical patch testing to identify allergies and to allow measurable results without causing adverse effects
  - Research had a clear purpose and was overseen by medical professionals
  - Subjects' confidentiality was maintained
  - Research was overseen by independent ethics bodies

Conclusion

- Available information indicates that:
  - The research was not fundamentally unethical
  - The research was not deficient relative to the ethical standards prevailing at the time the research was conducted
  - The research was not conducted in a way that placed participants at increased risk of harm or impaired their informed consent

Charge Questions

- Does available information support a determination that the conduct of the research was not fundamentally unethical?

- Does available information support a determination that the research was not deficient relative to the ethical standards prevailing at the time the research was conducted or conducted in a way that placed participants at increased risk of harm or impaired their informed consent?