

Photochemistry and Photobiology, 20\*\*, \*\*: \*-\*

## Long-term Effects of 222-nm ultraviolet radiation C Sterilizing Lamps on Mice Susceptible to Ultraviolet Radiation

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Received 21 February 2020, accepted 18 March 2020, DOI: 10.1111/php.13269

### ABSTRACT

**Germicidal lamps that emit primarily 254 nm ultraviolet radiation (UV) are routinely utilized for surface sterilization but cannot be used for human skin because they cause genotoxicity. As an alternative, 222-nm UVC has been reported to exert sterilizing ability comparable to that of 254-nm UVC without producing cyclobutane pyrimidine dimers (CPDs)**

effects on humans and experimental animals are skin carcinogenicity caused by genotoxicity (1–4). One of the main causes of UV-induced skin tumors is the formation of covalently linked dimers at dipyrimidine sites of cellular DNA consisting predominantly of cyclobutane pyrimidine dimers (CPDs) and pyrimidine (6-4) pyrimidone photoproducts (6-4 PPs) (5). Dipyrimidine photoproducts, in fact essentially deaminated cytosine containing