

Peer-Reviewed Scientific Studies

Most recent studies on COVID-19/Coronavirus:

Buonanno, M., Welch, D., Shuryak, I. et al. [Far-UVC light \(222 nm\) efficiently and safely inactivates airborne human coronaviruses](#). *Sci Rep* 10, 10285 (2020).

<https://doi.org/10.1038/s41598-020-67211-2>

Welch D, Buonanno M, Grilj V, et al. [Far-UVC light: A new tool to control the spread of airborne-mediated microbial diseases](#). *Sci Rep*. 2018;8(1):2752. Published 2018 Feb 9.

doi:10.1038/s41598-018-21058-w

Studies on far-UVC:

Beck S, Wright H, Hargy T, Larason T, Linden K. [Action spectra for validation of pathogen disinfection in medium-pressure ultraviolet \(UV\) systems](#). *Water Research*, Volume 70, 2015, Pages 27-37, ISSN 0043-1354. <https://doi.org/10.1016/j.watres.2014.11.028>

Buonanno M, Ponnaiya B, Welch D, Stanislauskas M, Randers-Pehrson G, Smilenov L, Lowy FD, Owens DM, Brenner DJ. 2017. [Germicidal efficacy and mammalian skin safety of 222-nm UV light](#). *Rad Res* 187:493-501.

Buonanno M, Randers-Pehrson G, Bigelow AW, Trivedi S, Lowry FD, Spotnitz HM, Hammer SC, Brenner DJ. 2013. [207-nm UV light – A promising tool for safe low-cost reduction of surgical site infections. I: In vitro studies](#). *PLoS One* 8:76968.

Buonanno M, Stanislauskas M, Ponnaiya B, Bigelow AW, Randers-Pehrson G, Xu Y, Shuryak I, Smilenov L, Owens DM, Brenner DJ. 2016. [207-nm UV light – A promising tool for safe low-cost reduction of surgical site infections. II: In vivo safety studies](#). *PLoS One* 11:e0138418

Clauß M. 2006. [Higher effectiveness of photoinactivation of bacterial spores, UV resistant vegetative bacteria and mold spores with 222 nm compared to 254 nm wavelength](#). *Acta Hydrochim Hydrobiol* 34:525-532.

Kaidzu S, Sugihara K, Sasaki M, Nishiaki A, Igarashi T, Tanito M. 2019. [Evaluation of acute corneal damage induced by 222-nm and 254-nm ultraviolet light in Sprague-Dawley rats](#). *Free Rad Res* 53:611-617.

Narita K, Asano K, Morimoto Y, Igarashi T, Hamblin MR, Dai T, Nakane A. 2018. [Disinfection and healing effects of 222-nm UVC light on methicillin-resistant *Staphylococcus aureus* infection in mouse wounds](#). *J Photochem Photobiol B: Biol* 178:10–18.

Narita K, Asano K, Morimoto Y, Igarashi T, Nakane A. 2018. [Chronic irradiation with 222-nm UVC light induces neither DNA damage nor epidermal lesions in mouse skin, even at high doses](#). *PLoS One* 13:e0201259.

Narita K, Asano K, Naito K, Ohashi H, Sasaki M, Morimoto Y, Igarashi T, Nakane A. 2020 [222-nm UVC inactivates a wide spectrum of microbial pathogens](#) .J Hosp Infect. 2020 Mar 31. pii: S0195-6701(20)30129-8. doi: 10.1016/j.jhin.2020.03.030

Ponnaiya B, Buonanno M, Welch D, Shuryak I, Randers-Pehrson G, Brenner DJ. 2018. [Far-UVC light prevents MRSA infection of superficial wounds in vivo](#). PLoS One 13:e0192053.

Wang D, Oppenländer T, El-Din MG, Bolton JR. 2010. [Comparison of the disinfection effects of vacuum-UV \(VUV\) and UV light on Bacillus subtilis spores in aqueous suspensions at 172, 222 and 254 nm](#). Photochem Photobiol 86:176-181.

Welch D, Buonanno M, Grilj V, Shuryak I, Crickmore C, Bigelow AW, Randers-Pehrson G, Johnson GW, Brenner DJ. 2018. [Far-UVC light: A new tool to control the spread of airborne-mediated microbial diseases](#). Sci Rep 8:2752.

Welch D, Buonanno M, Shuryak I, Randers-Pehrson G, Spotnitz HM, Brenner DJ. 2018. [Effect of far ultraviolet light emitted from an optical diffuser on methicillin-resistant Staphylococcus aureus in vitro](#). PLoS One 13:e0202275.

Yamano N, Kunisada M, Kaidzu S, Sugihara K, Nishiaki-Sawada A, Ohashi H, Yoshioka A, Igarashi T, Ohira A, Tanito M, Nishigori C. 2020. [Long-term effects of 222 nm ultraviolet radiation C sterilizing lamps on mice susceptible to ultraviolet radiation](#). Photochem Photobiol, Accepted Author Manuscript. <https://doi.org/10.1111/php.13269>

