An Innovative Approach to the Detection of Ringworm

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Currently there are cleaning methods that help eliminate ringworm-causing fungi on surfaces like wrestling mats; however, there is no way to check whether or not the ringworm has been completely eradicated from the area. Using distilled water and a dye called Fluorescent Brightener 28, we tested the hypothesis that if ringworm is exposed to a solution that contains Fluorescent Brightener 28 and an ultraviolet light is later shone on the ringworm, then the ringworm will exhibit a visible fluorescence. The solution was made by mixing .2 grams of Fluorescent Brightener 28 with 2550 milliliters of distilled water. Once made, the solution was sprayed on Epidermophyton stockdaleae, which had been spread onto a piece of material similar to that of wrestling mats. The lights were turned off, and ultraviolet light was shone onto the fungus, causing it to exhibit a visible green fluorescence. The minimal number of cells needed to see the fluorescence was also found. Being able to make ringworm fluoresce would allow people to see if certain surfaces are housing ringworm before cleaning and see if the fungus is still there after the surface has been cleaned. This could help in making sure surfaces are clean, which could ultimately lead to fewer cases of ringworm.