New research confirms correlation of common bacteria (including MRSA) and eczema

LONDON, UNITED KINGDOM, July 26, 2016 /EINPresswire.com/ -- New research confirms correlation of common bacteria (including MRSA) and eczema

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A new study published in the British Journal of Dermatology1 has shown that, on average, 70% of eczema patients are colonised with Staphylococcus aureus bacteria (S. aureus, including MRSA) on their skin lesions. Patients with more severe disease had a greater risk of being colonised. These results provide an indication of the importance of colonisation as a possible trigger in eczema.

The systematic review from Erasmus MC University looked at 95 observational studies comprising over 9000 patients. Interestingly, 39% of eczema patients carried S. aureus on healthy skin, compared with 70% that carried it on lesional skin where the dermatitis is present. This is an almost twenty-fold increase compared to healthy controls.

In addition, up to 80% of eczema patients were found to have a strain of S. aureus that produced a toxin. These toxins have been known to stimulate the inflammatory response, contributing to the skin barrier defects in eczema, and may therefore be a primary trigger of the condition.

Currently, eczema is mainly treated with corticosteroids and in the case of infection, with antibiotics. However, these drugs can result in side effects, drug-resistance and damage to the skin's normal beneficial bacteria, making them unsuitable for long-term use.

Professor of Paediatric Dermatology at the Erasmus MC University Suzanne Pasmans, and senior author of the paper said: "This review demonstrates the importance of colonisation with S. aureus, as a factor in the pathogenesis of atopic dermatitis. To decipher the exact role of S. aureus, studies using targeted antistaphylococcal therapy for the skin need to be done."

Micreos, a Dutch biotech company who helped fund the review, is leading the way with the development of Staphefekt™, a bacteria-killing enzyme, or endolysin, specific to S. aureus, which is as effective in killing MRSA as other strains of S. aureus.

The mechanism of action of endolysins is unrelated to that of antibiotics, so even resistant bacteria, such as MRSA, are susceptible. Staphefekt™ is the first endolysin registered for use on the skin's microbiome, and is currently used as the active compound in Gladskin (a range of topical creams and gels for inflammatory skin conditions, such as eczema).

Unlike antibiotics, bacterial resistance to Staphefekt has not been observed or expected, and its specificity means beneficial bacteria are preserved, making it suitable for long-term daily use.

Prof Pasmans added: "We have just enrolled the first patients in a prospective, randomised, placebo controlled trial using Gladskin. This study will provide insight in the effects of targeted S. aureus elimination on the overall skin-microbiome and clinical symptoms of eczema".

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Notes to editors

About Micreos
Micreos develops antibacterial solutions based on endolysin technology as a replacement for antibiotics in healthcare, veterinary medicine, the food processing industry and agriculture.

References

1 Totté, J.E.E., van der Feltz, W.T., Hennekam, M, et al. (2016) ‘Prevalence and odds of staphylococcus aureuscarriage in atopic dermatitis: A systematic review and meta-analysis’, British Journal of Dermatology,. doi: 10.1111/bjd.14566.

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