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**Biofilms and their importance in skin ecology**

**1. Can biofilms on skin or wounds be beneficial e.g. by preventing colonisation?**

Yes, our bodies have a natural, commensal flora and they form biofilms around hair follicles on the skin. These biofilms help to provide a barrier to pathogens thus are extremely beneficial. I do not know of any instances where biofilms on wounds are beneficial. Even if the bacteria are non-pathogenic, the presence of bacteria triggers an immune response and the body needs the immune response to subside in order for the later phases of wound healing, such as remodelling, to commence.

**2. How can the use of in vitro biofilms help the formulation of cosmetics containing prebiotics/probiotics?**

This would depend on the intended use of the probiotic. If the aim was to have a bactericidal response we could monitor this by growing reproducible in vitro biofilms and carrying out a quantitative assessment on the remaining biofilm following the treatment step.

**3. Is abundance of staph aureus a contributor or consequence of eczema?**

I'm afraid I don't know the answer to this other than to say that *S. aureus* is a common skin commensal on individuals with and without eczema. It is known, however, to act as an opportunistic pathogen given the correct circumstances. As such my guess would be that it is a contributor, but that is purely an assumption and not an area I have researched.