

## Assessing different wound dressings on biofilm-infected wounded Labskin

### Objective:

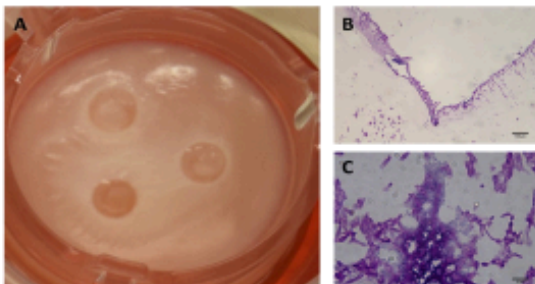
To determine whether a manuka honey, iodine or a silver impregnated wound dressing will decrease the growth of *S. aureus* and *C. albicans* when forming a polymicrobial biofilm on wounded Labskin.

### Method:

- Each Labskin sample was wounded with a biopsy punch and immediately infected with a mix of *S. aureus* and *C. albicans*.
- All samples were incubated for 48h to allow biofilm formation
- After 48h, some samples had wound dressings applied directly on top of the wound site and then incubated for another 72 h.
- Samples were assessed by microbial viable counting

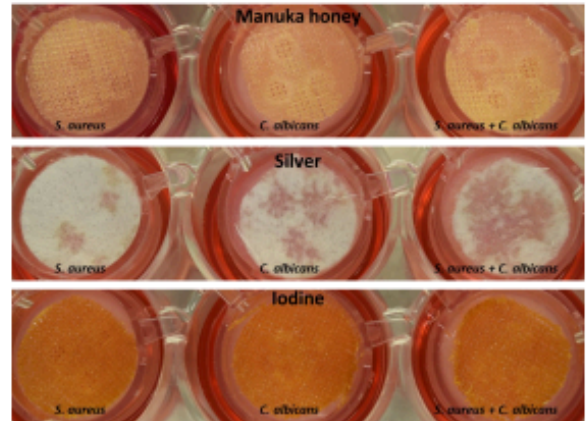
### Results:

**Figure 1** - Biofilm formation on wounded Labskin and PAS staining. (A) Polymicrobial biofilm growing in wounded Labskin<sup>4,5</sup> (B). PAS staining showing a biofilm infecting a wound (10x). (C) High magnification of biofilm showing yeast and bacteria growing together (100x)

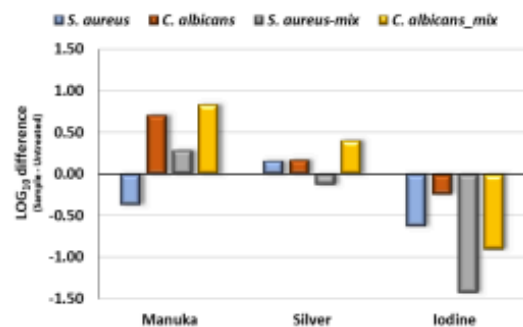


### Results continued:

**Figure 2** - Application of wound dressing after 48 hours of biofilm formation



**Figure 3** - Viable counts after 72 hours of treatment Log<sub>10</sub> difference compared to Untreated control.



### Summary:

Mono and polymicrobial biofilms were successfully developed in the Labskin wounded model. The wounds were infected with bacteria, fungi or a mix of both microbes.

Only the dressing containing iodine has a clear antimicrobial effect.

