

## Biofilm formation on TMZF® and CrCo discs for architecture and antibiotic susceptibility tests.

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### **Biofilms and Implant-related Infections**

- It is well known that implant-related infection is difficult to treat, and curative therapy is still not available.
- The adhering bacteria involved can evade host defences by forming biofilms.



# Objectives

Cultivation of *S. aureus* biofilms *in vitro* over TMZF<sup>®</sup> (Ti-6Al-4V alloy) and CrCo discs for antibiotic susceptibility tests and architecture investigation by using SEM.



Establishment of a method for biofilm studies.

## Methods



#### **Results – Susceptibility Tests**

Comparison between MIC and BIC (µg/ml)				
Method	TMZF®		CrCo	
	MIC	BIC	MIC	BIC
Gentamicin	.25	▲ >36	.25	<mark>↑</mark> >256
Vancomycin	1	>256	1	>256
Rifampicin	<.016	>256	<.016	>256
Fosfomycin	1	>256	1	>256
Clindamycin	.094	>256	.094	>256
Linezolid	2	>256	¥ 2	>256

MIC = Minimal Inhibitory Concentration BIC = Biofilm Inhibitory Concentration



### **Results - SEM**



TMZF®

CrCo

### Conclusions

The method used in this study for the growth efficient and reproducible what allows furthe periprosthetic joint infection.



#### Why are they so resistant?



House (Protection)



Teamwork

Thank you for your attention!

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