

# Osteoclastic resorption of dense beta-tricalcium phosphate ceramics

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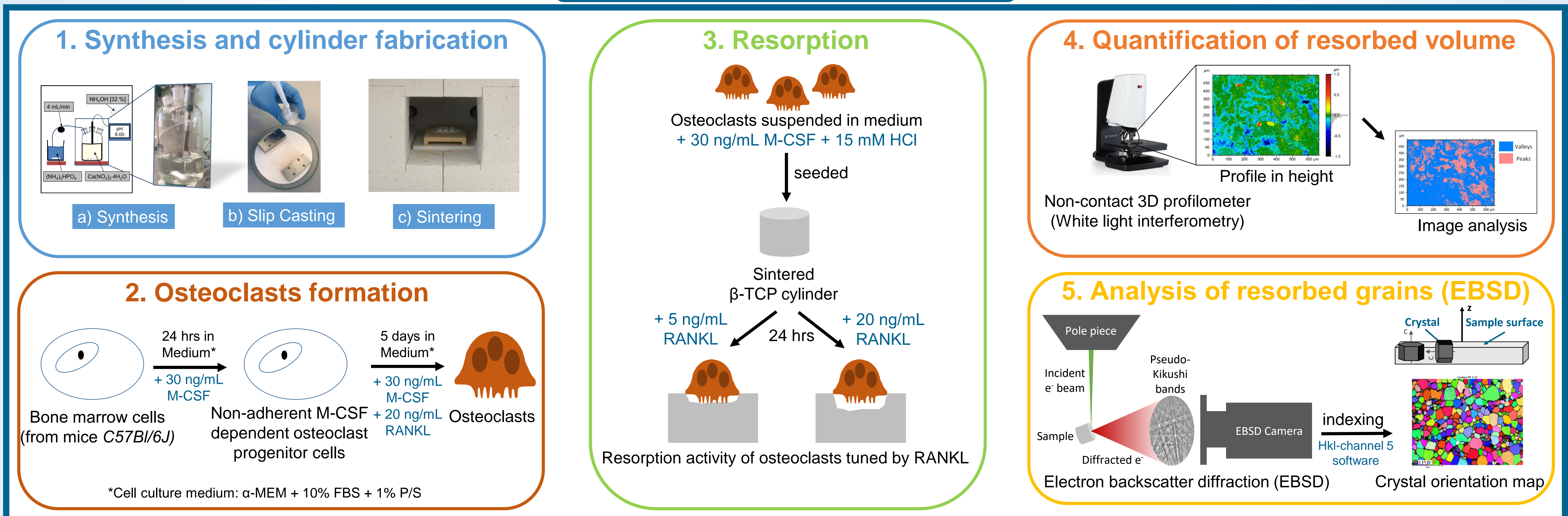
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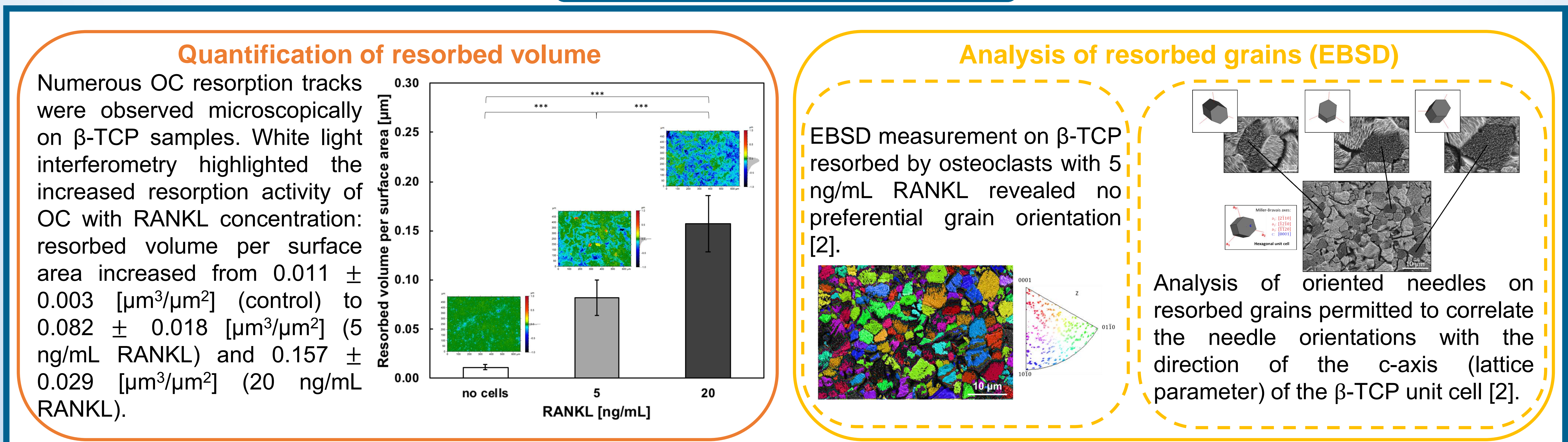
## Introduction

Calcium phosphates (CaPs) and particularly  $\beta$ -tricalcium phosphate ( $\text{Ca}_3(\text{PO}_4)_2$ ;  $\beta$ -TCP) are well-known to enhance the self-healing abilities of bone [1]. Once implanted,  $\beta$ -TCP grafts are resorbed by osteoclast cells (OC) and replaced by new bone. This study had two aims: 1) find a method to quantify the volume of  $\beta$ -TCP resorbed by OC *in vitro* and 2) investigate if the  $\beta$ -TCP resorption occurred along preferential grain orientations.

## Materials and Methods



## Results and Discussion



## Summary

White light interferometry is a very potent technique to quantify OC resorption activity and SEM-EBSD measurements demonstrated that  $\beta$ -TCP is resorbed preferentially along the crystallographic c-axis.

## References

[1] M. Böhner, Materials Today, 2010;13: 24-30

[2] M. Gallo, B. Le Gars Santoni *et al.*, Acta Biomaterialia (in revision)

## Acknowledgements

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