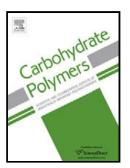
### Accepted Manuscript

Title: Sulfation degree not origin of chondroitin sulfate derivatives modulates keratinocyte response

Authors: Luisana Corsuto, Sandra Rother, Linda Koehler, Emiliano Bedini, Stephanie Moeller, Matthias Schnabelrauch, Vera Hintze, Chiara Schiraldi, Dieter Scharnweber

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## ACCEPTED MANUSCRIPT

#### Sulfation degree not origin of chondroitin sulfate derivatives modulates keratinocyte response

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Graphical abstract

#### Highlights – 3 – 5 with maximum 85 characters, including spaces

- Chondroitin sulfate (CS) derivatives sulfation-dependently bind mediator proteins
- Semi-synthetic and extractive CS variants interact comparable with VEGF-A
- High-sulfated CS variants (sCS3) enhance the keratinocyte release of active TGF-β1
- The keratinocyte proliferation and migration is decelerated in the presence of sCS3
- sCS3-based biomaterials may rebalance hyperproliferative epidermis in chronic wounds

#### Abstract

Chondroitin sulfate (CS) sulfation-dependently binds transforming growth factor- $\beta$ 1 (TGF- $\beta$ 1) and chronic wounds often accompany with epidermal hyperproliferation due to downregulated TGF- $\beta$ 

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