

## **Bacterial cellulose – from lab to market**

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Bacterial nanocellulose (BNC) is a nanofibrillar exopolysaccharide synthesized by certain Gram-negative, obligate aerobic, acetic acid bacteria, the *Komagataeibacter* genus being the most important due to the high cellulose yield obtained. The unique properties of this biopolymer have supported a wide range of potential applications, in human and veterinary medicine, odontology, pharmaceutical industry, acoustic and filter membranes, biotechnological devices and in the food and paper industry. The large-scale production of BNC, through advanced biotechnology has eluded many researches. Historical attempts but on low volume and high-value (mostly for biomedical applications) production can be traced back to the 90s.

This presentation will show the main work with BNC by the Funcarb group. Examples of these studies will include the use of BNC in biomedical and food applications. Finally, an overview on the main efforts towards the production of BNC at large scale and potential markets will also be presented.