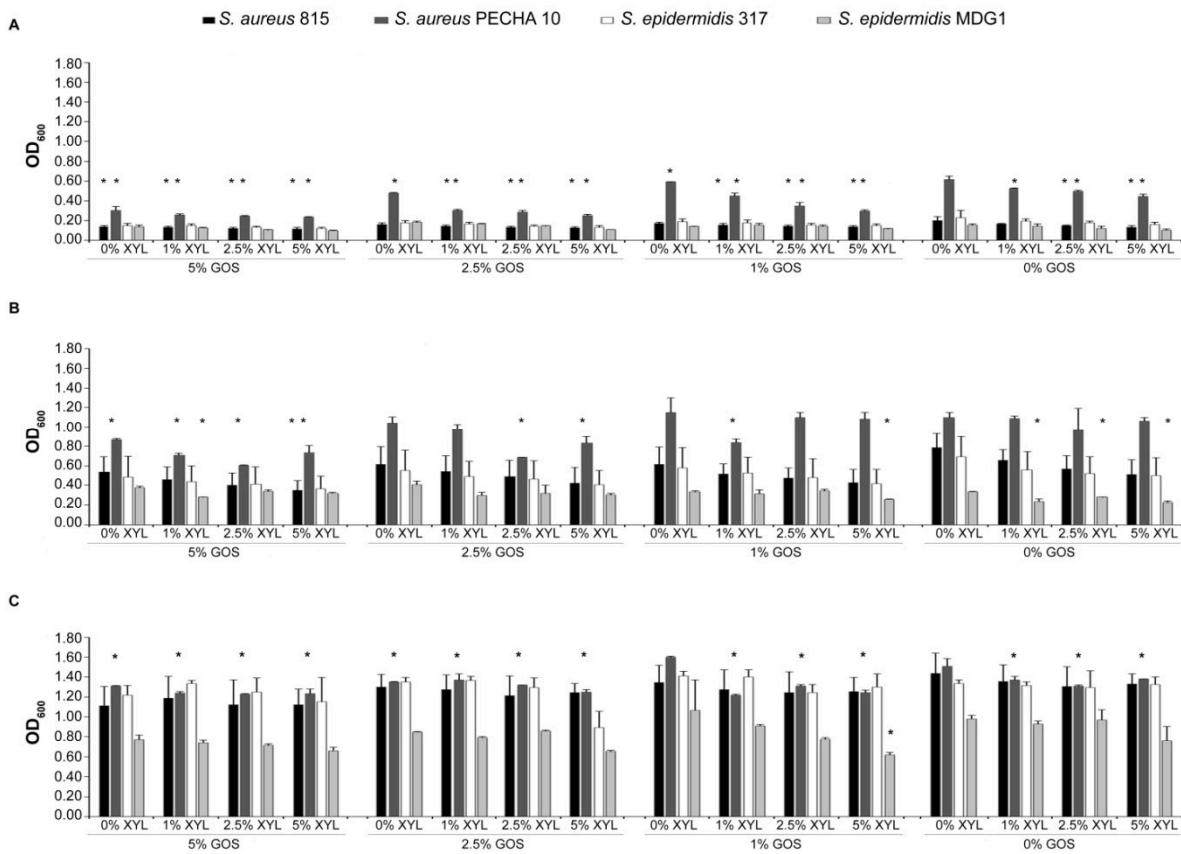
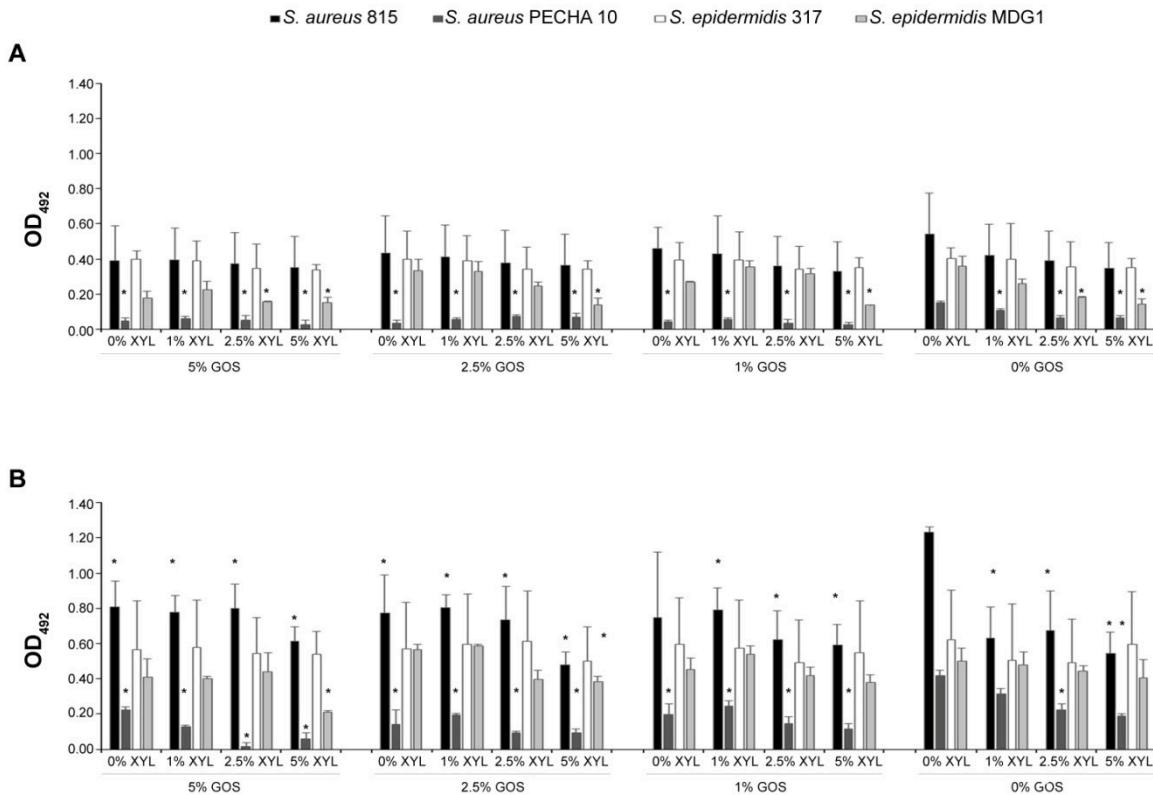


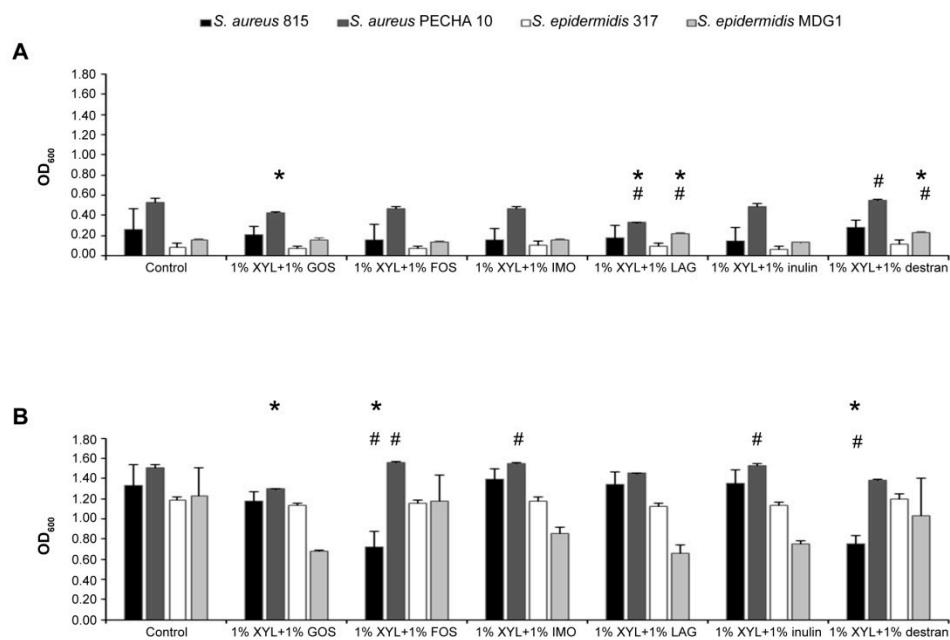
## Supplementary information



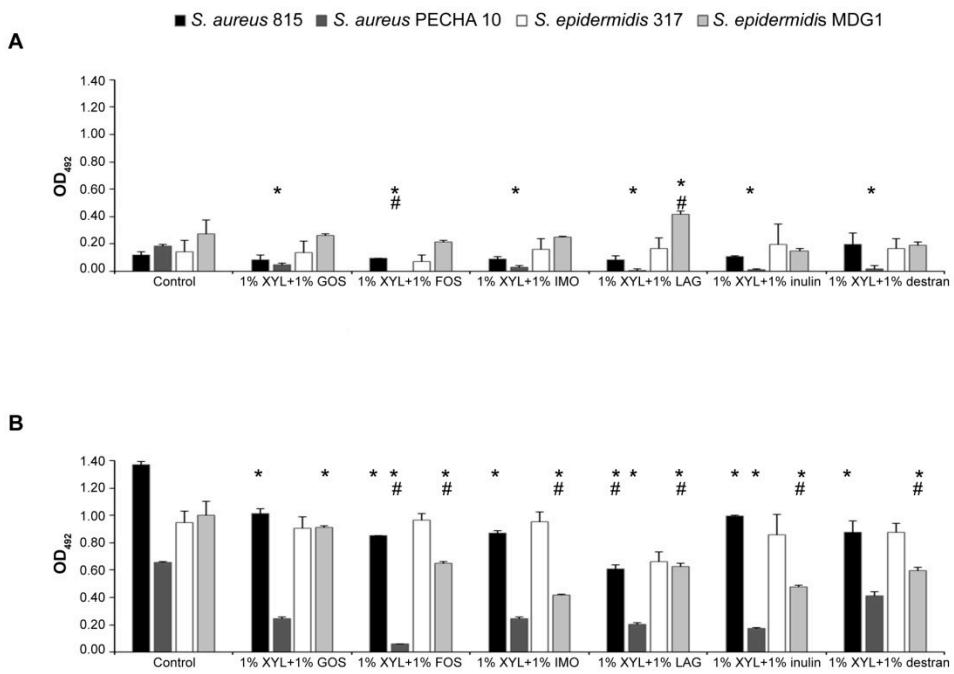
**Figure S1.** Optical density (OD<sub>600</sub>) of *S. aureus* 815, *S. aureus* PECHA 10, *S. epidermidis* 317 and *S. epidermidis* MDG1 planktonic growth after 3 h (**A**), 6 h (**B**), 24 h (**C**) of contact with Xylitol (XYL) and Galacto-OligoSaccharide (GOS) at different concentrations (1, 2.5, 5%). \*statistically significant in respect to the control ( $p < 0.05$ ).



**Figure S2.** Biomass quantification (OD<sub>492</sub>) of *S. aureus* 815, *S. aureus* PECHA 10, *S. epidermidis* 317 and *S. epidermidis* MDG1 biofilm formation after treatment with different concentrations of Xylitol (XYL) and Galacto-OligoSaccharide (GOS) at 3 h (**A**) and 24 h (**B**), respectively. \*statistically significant in respect to the control ( $p < 0.05$ ).



**Figure S3.** Optical density (OD<sub>600</sub>) of *S. aureus* 815, *S. aureus* PECHA 10, *S. epidermidis* 317 and *S. epidermidis* MDG1 planktonic growth after 3 h (**A**), 24 h (**B**) of contact with 1% of Xylitol (XYL) and 1% of skin emerging prebiotics: FOS or IMO or LAG or inulin or dextran. \*statistically significant in respect to the control ( $p < 0.05$ ). #statistically significant in respect to the RC (1% XYL + 1% GOS) ( $p < 0.05$ ). For abbreviations, see materials and methods.



**Figure S4.** Biomass quantification (OD<sub>492</sub>) of *S. aureus* 815, *S. aureus* PECHA 10, *S. epidermidis* 317 and *S. epidermidis* MDG1 biofilm formation after treatment with 1% XYL and 1% FOS or IMO or LAG or inulin or dextran at 3 h (**A**) and 24 h (**B**), respectively. \*statistically significant in respect to the control ( $p < 0.05$ ). #statistically significant in respect to the RC (1% XYL + 1% GOS) ( $p < 0.05$ ). For abbreviations, see materials and methods.