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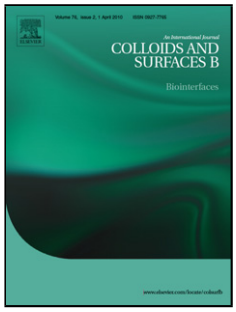

Title: Impact of coated TiO_2-nanoparticles used in sunscreens on two representative strains of the human microbiota: Effect of the particle surface nature and aging

Authors: Laura Rowenczyk, Cécile Duclairoir-Poc, Magalie Barreau, Céline Picard, Nicolas Hucher, Nicole Orange, Michel Grisel, Marc Feuilloley

PII: S0927-7765(17)30425-3
DOI: http://dx.doi.org/doi:10.1016/j.colsurfb.2017.07.013
Reference: COLSUB 8676

To appear in: *Colloids and Surfaces B: Biointerfaces*

Received date: 14-2-2017
Revised date: 1-6-2017
Accepted date: 5-7-2017

Please cite this article as: Laura Rowenczyk, Cécile Duclairoir-Poc, Magalie Barreau, Céline Picard, Nicolas Hucher, Nicole Orange, Michel Grisel, Marc Feuilloley, Impact of coated TiO2-nanoparticles used in sunscreens on two representative strains of the human microbiota: Effect of the particle surface nature and aging, Colloids and Surfaces B: Biointerfaceshttp://dx.doi.org/10.1016/j.colsurfb.2017.07.013

Impact of coated TiO_2-nanoparticles used in sunscreens on two representative strains of the human microbiota: Effect of the particle surface nature and aging

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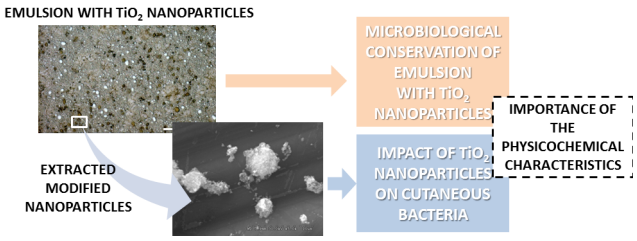

- Surface properties of coated TiO_2-nanoparticles evolved during aging in model emulsions
- Impact on skin bacteria evaluated through two exposure scenarios mimicking use conditions
- Hydrophobic nanoparticles modified the physicochemical characteristics of model emulsions
- Hydrophobic nanoparticles favored the development of potential pathogenic bacteria
- Importance of the polarity of nanoparticles was highlighted regarding their impact on bacteria

Keywords: TiO_2-nanoparticles, cutaneous bacteria, bacteria growth, surface treatment, polarity, surface charge.