

# 5-methyl Furfural Reduces the Production of Malodors by Inhibiting Sodium L-lactate Fermentation of *Staphylococcus epidermidis*: Implication for Deodorants Targeting the Fermenting Skin Microbiome

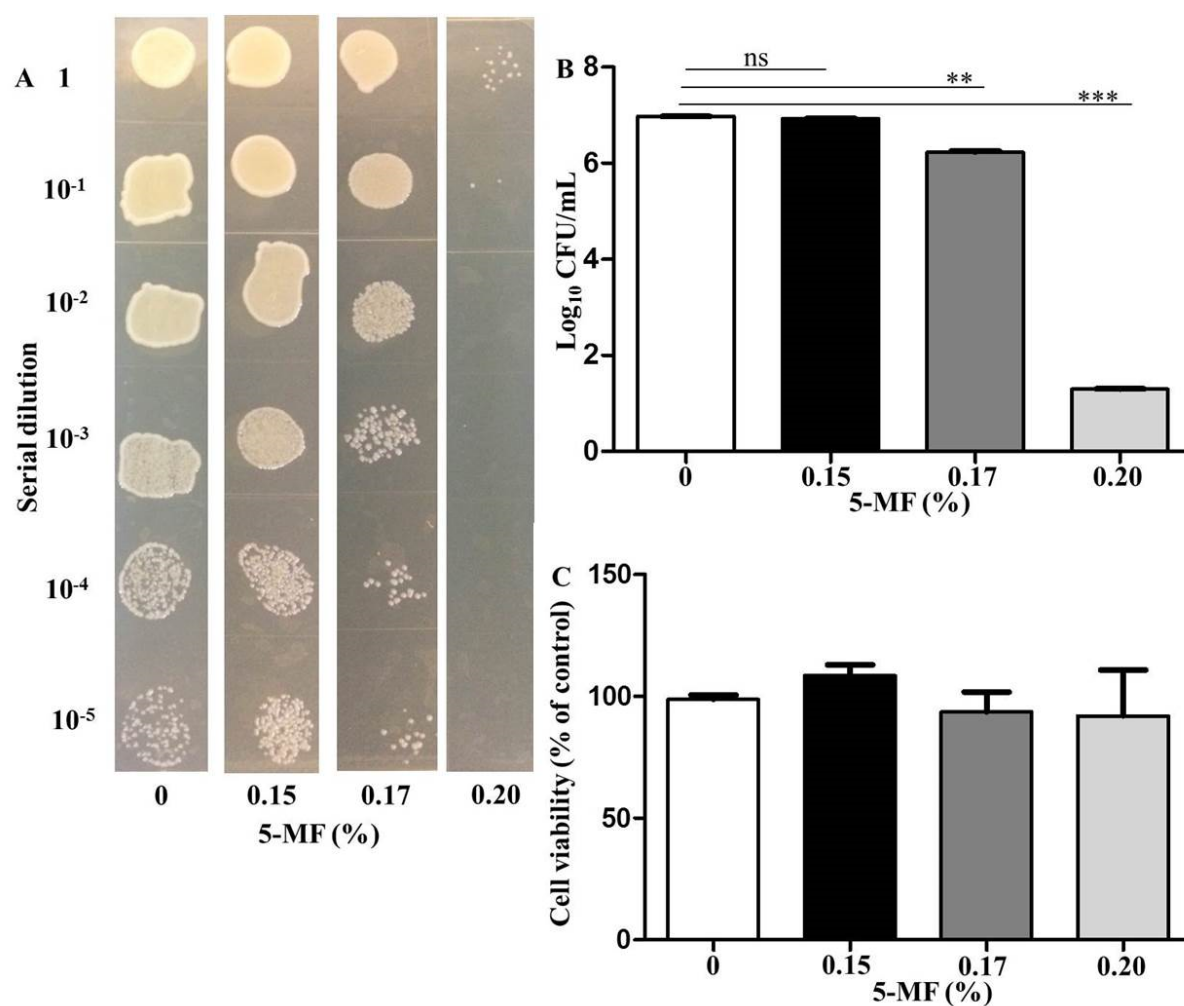
Manish Kumar <sup>1</sup>, Binderya Myagmardoolonjin <sup>1</sup>, Sunita Keshari <sup>2</sup>, Indira Putri Negari <sup>1</sup> and Chun-Ming Huang <sup>1,2,3,\*</sup>

<sup>1</sup> Department of Biomedical Sciences and Engineering, National Central University, Taoyuan 320009, Taiwan; manishhari3@gmail.com (M.K.); binderya.smile@yahoo.com (B.M.); indraputri24@ncu.edu.tw (I.P.N.)

<sup>2</sup> Department of Life Sciences, National Central University, Taoyuan, 320009, Taiwan; sunitakeshari827@gmail.com (S.K.)

<sup>3</sup> Department of Dermatology, School of Medicine, University of California, San Diego, 92093, CA, USA

\* Correspondence: chunming@ncu.edu.tw



**Figure S1.** Effect of 5MF on the growth of *S. epidermidis* and the viability of human keratinocytes. **(A,B)** *S. epidermidis* ( $10^3$  CFU/mL) was incubated with or without 0.15%, 0.17% or 0.20% 5MF for 24 h. CFUs ( $\log_{10}$ /mL) of *S. epidermidis* were enumerated by plating serial dilutions ( $1:10^1$ – $1:10^5$ ) of culture media on a TSB plate for 24 h. **(C)** The CCD 1106 KERTr ( $5 \times 10^3$ ) keratinocyte cells, were treated with or without 0.15%, 0.17%, or 0.20% 5MF for 24 h. The viabilities of cells treated with 5MF were determined by a MTT assay and expressed as % of cells treated without 5MF (control). Data are the mean  $\pm$  SD of three independent experiments. \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$  (two-tailed *t*-tests). ns = not significant.