

Fluorescent Labeling of the Antimicrobial Peptide Dendrimer **G3KL** to Probe Its Entry into *Pseudomonas aeruginosa*

B. Gan¹, T. Darbre¹, J. L. Reymond^{1*}

¹University of Bern

We recently showed that peptide dendrimer **G3KL**, with amino acid sequence (KL)₈(KKL)₄(KKL)₂KKL, exerts strong antimicrobial activity against multidrug resistant clinical isolates of the Gram negative bacteria *A. Baumannii* and *P. aeruginosa*^{1,2}. **G3KL** was further shown to have positive impact in burn wound-healing processes and pro-angiogenic effect³. Inspired by imaging studies with fluorescent analogs of the cyclic antimicrobial peptide polymyxin B,⁴ we have modified **G3KL** at its C-terminus and obtained fluorescent analogs that retain the antimicrobial activity of **G3KL**, and used super resolution STED nanoscopy imaging to investigate how these fluorescent **G3KL** analogs penetrate *P. aeruginosa* cells.

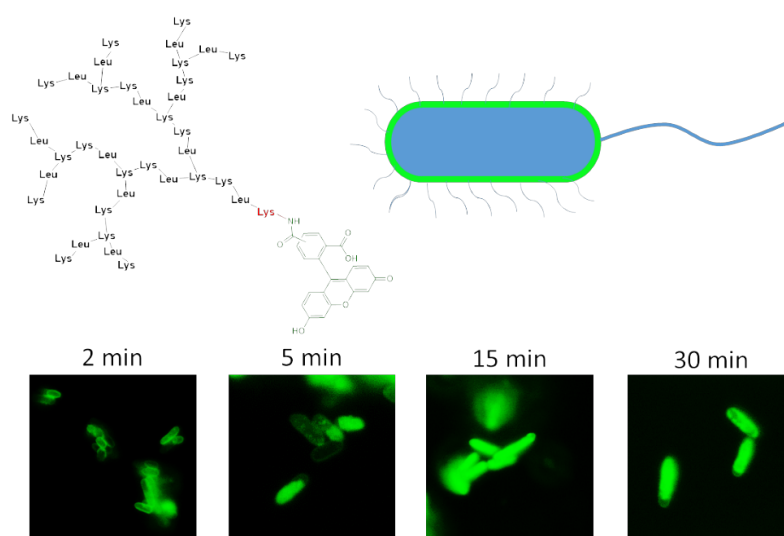


Figure 1: Structure of the fluorescein labeled peptide dendrimer **G3KL** and nanoscopy STED imaging of *Pseudomonas aeruginosa*.

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[3] Abdel-Sayed P., Kaeppli A., Siriwardena T., Darbre T., Perron K., Jafari P., Reymond JL., Pioletti DP., Applegate LA., *Sci Rep.* **2016**, 6, 22020

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