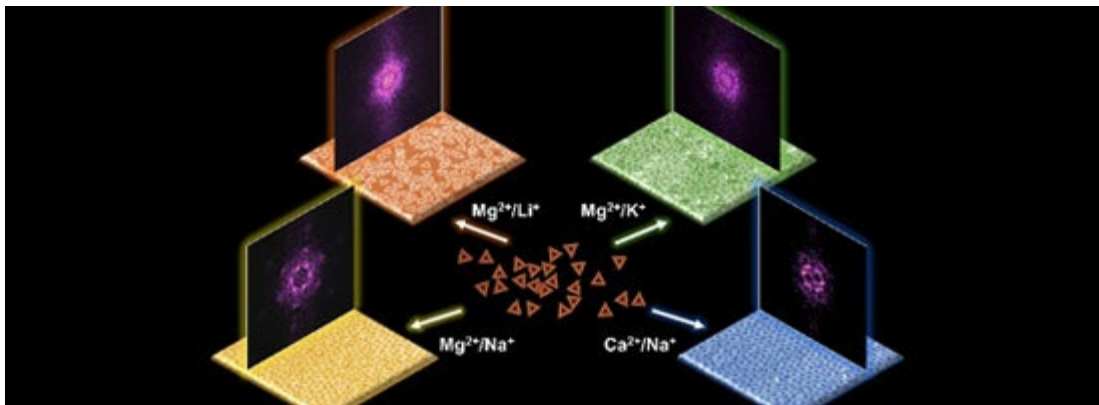




Implen Journal Club | December Issue

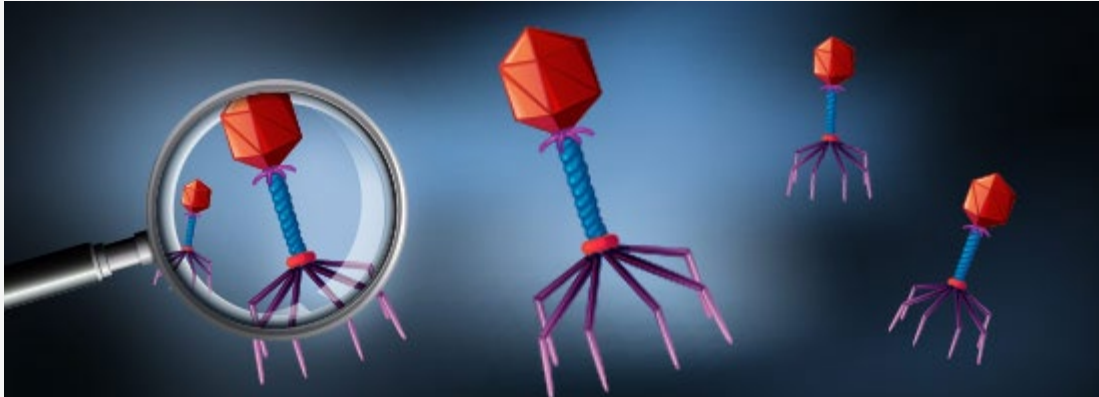
Implen wishes everyone a Merry Christmas and a Happy New Year!



DNA origami is becoming an important aspect during the investigation of nanostructures and - particles and has great potential as an innovative way to improve drug targeting and delivery. Therefore, we are going to highlight two recent publications on this topic in this issue of Implén NanoPhotometer® JournalClub. Yang Xin, Marcel Hanke, Alejandro Gonzalez Orive, Salvador Martinez Rivadeneira, Guido Grundmeier, Mario Castro and Adrian Keller from Paderborn University, University of La Laguna and Universidad Pontificia Comillas de Madrid were able to improve general experimental settings as well as the understanding of DNA nanostructure–amyloid interaction which might result in ensuring safety of the numerous DNA nanostructure-based therapies currently in development. The concentrations of the obtained DNA origami solutions and DNA origami triangles were determined using an Implén NanoPhotometer®.

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The rise of multi-resistant bacteria like *Klebsiella pneumoniae* is an increasing threat to human health and new antibacterial strategies such as bacteriophages are urgently needed in medicine. Therefore, this Implen NanoPhotometer® JournalClub highlights the joint research of Mikhail Fursov, Radmila Abdrakhmanova, Nataliia Antonova, Daria Vasina, Anastasia Kolchanova, Olga Bashkina, Oleg Rubalsky, Marina Samotrueva, Vasilii Potapov, Valentine Makarov, Sergey Yudin, Alexander Gintsburg, Artem Tkachuk, Vladimir Gushchin and Evgenii Rubalskii about the efficacy of a broad-range recombinant endolysin of the coliphage LysECD7 against forming and mature biofilms. They were able to show that LysECD7 acted against emerging and formed biofilms both in vitro and in vivo, making it a promising agent for local or systemic application. Protein concentrations were measured using the NanoPhotometer® at 280 nm and calculated using a predicted extinction coefficient (1.46 (mg/mL)⁻¹ cm⁻¹).

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We like to thank all of you for your interest in our NanoPhotometer® Journal Club throughout the year and conclude with a seasonal and environmentally relevant topic: Pinaceae. Marta Nunes da Silva, Alejandro Solla, Luis Sampedro, Rafael Zas, Marta Vasconcelos from Universidade Católica Portuguesa, Universidad de Extremadura and Misión Biológica de Galicia published their research about the pine wilt disease which is caused by Nematodes and their extreme impacts on local forest ecosystems. Due to global warming and increased drought stress in Southern Europe pine wilt disease might spread northwards, threatening central European forests. The NanoPhotometer® was used to measure total chlorophyll concentration at 537, 647 and 663 nm as well as plant oxidative stress and cell damage by quantifying lipid peroxidation at 450, 532 and 600 nm.

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