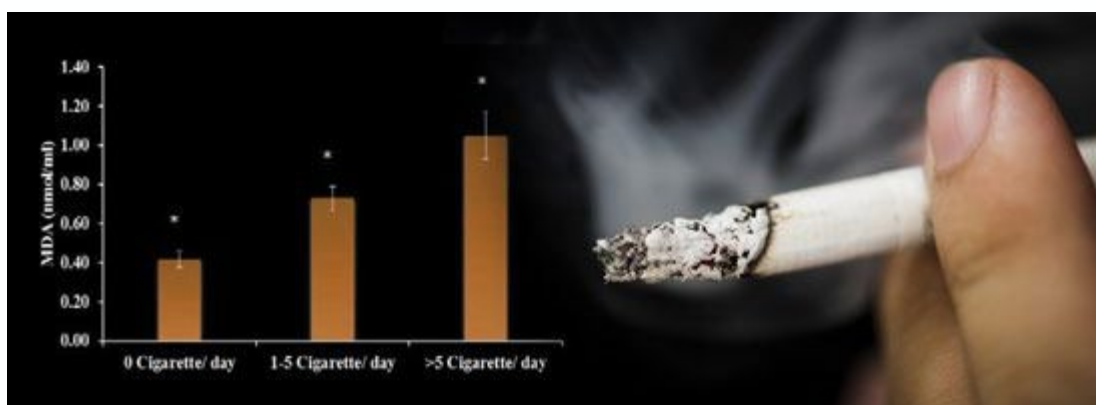




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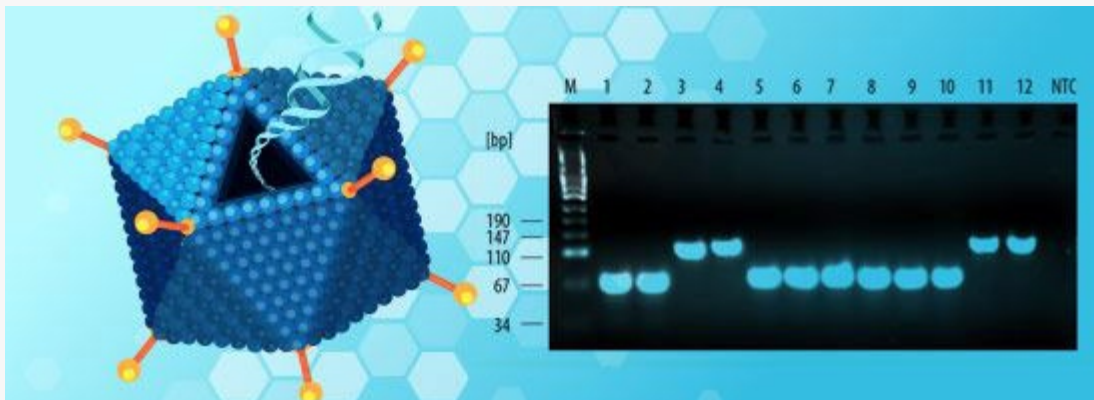
Welcome to our second issue of the #Implen #JournalClub in 2021.



In this issue of the #Implen #JournalClub in 2021.NanoPhotometer #JournalClub, we are starting with highlighting cigarette smoking as a major health issue and a cause of large number of deaths worldwide. Smoking leads to generation of enormous amount of reactive oxygen species and lipid peroxidation which generates malondialdehyde (MDA). MDA concentration in serum is a reliable biomarker to evaluate lipid peroxidation status. Shikha Jaggi and Abhay Singh Yadav from Kurukshetra University were able to show significant positive relationship between serum MDA level and cigarette consumption. To determine malondialdehyde concentration, readings were taken for light pink coloured supernatant on the NanoPhotometer® at 532 nm with an extinction coefficient of

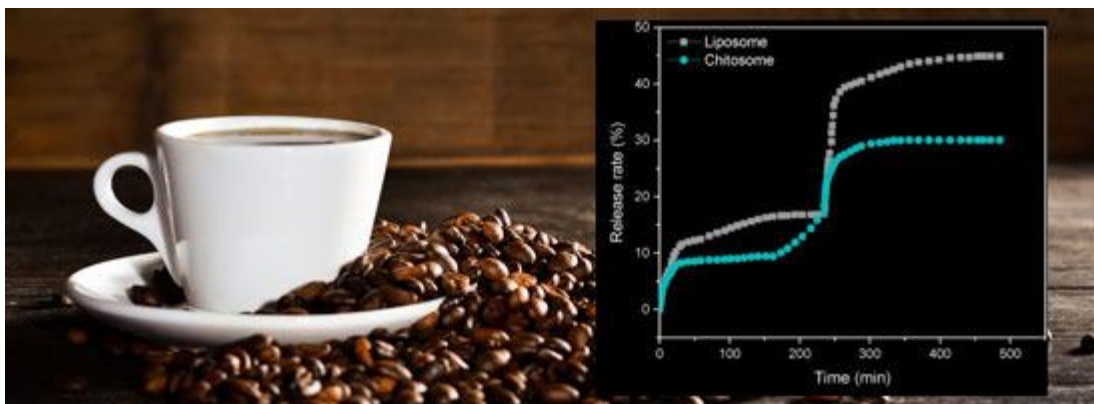
1.56 X 10⁵ nmol L⁻¹ cm⁻¹ and expressed as nmoles/ml of serum.

[Learn more](#)



Research on adenoviruses has become of increased interest due to the current developments of vaccines against Sars-CoV-2 and their use as vectors. We would like to highlight the publication of Iwona Bil-Lula, Nicola De Franceschi, Krzysztof Pawlik, and Mieczysław Woźniak from University of Medicine in Wrocław, University of Padua and Polish Academy of Sciences. They implemented a new assay in clinical and laboratory practice which provides a rapid, reliable and less laborious method for detection and monitoring of AdV replication in immunocompromised patients. Plasmid concentration and purity as well as concentration of viral DNA was measured using the NanoPhotometer®.

[Learn more](#)



Grab your cup of coffee now as the following publication listed is all about caffeine. Mohammad Mahdi Seyedabadi, Hosein Rostami, Seid Mahdi Jafari and Morteza Fathi from Baqiyatallah

University of Medical Sciences and Gorgan University of Agricultural Sciences and Natural Resources published their findings about chitosan-coated nanoliposomes as a delivery system for encapsulation of caffeine. Overall, the results showed the potential of chitosomes for caffeine retention and sustained release in the digestive system, bearing more advantages compared to nanoliposomes. The NanoPhotometer® was used to measure the content of released caffeine at 273 nm using a standard curve.

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Metabarcoding may help to identify (cryptic) organisms which are difficult to distinguish by conventional morphological taxonomy, especially in marine environments. However, it is important to identify and control spread of non-indigenous marine biofouling species to prevent economic and environmental impacts. In their study Ulla von Ammon, Susanna A. Wood, Olivier Laroche, Anastasija Zaiko, Leigh Tait, Shane Lavery, Graeme Inglis and Xavier Pochon from University of Auckland, Cawthron Institute and National Institute of Water & Atmospheric Research identified 48 potential non-indigenous species using morpho-taxonomy and metabarcoding (18S rRNA and COI), highlighting several on-going challenges. The quantity and quality of extracted DNA were measured using the NanoPhotometer®.

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