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In-vitro* pancreatic cancer cell imaging by indocyanine green based polymeric nanoprobe*Oguzhan Gunduz¹, Zeynep R Ege¹, Aydin Akan², Faik N Oktar¹, Chi C Lin³, Durdane S Kuruca⁴, Betul Karademir¹, Yesim M Sahin⁵ and Gokce Erdemir⁴**¹Marmara University, Turkey²Izmir Katip Celebi University, Turkey³Tunghai University, Boulevard, Taiwan⁴University of Istanbul, Turkey⁵Arel University, Turkey

Indocyanine green (ICG) provides an advantage in the imaging of deep tumors as it can reach deeper location without being absorbed in the upper layers of biological tissues in the wavelengths, which named 'therapeutic window' in the tissue engineering. Unfortunately, rapid elimination and short-term stability in aqueous media limited its use as a fluorescence probe for the early detection of cancerous tissue. In this study, stabilization of ICG was performed by encapsulating it into the biodegradable polymer composited with poly (L-lactic acid)

and poly(e-caprolactone) via a simple one-step multiaxial electrospinning. Confocal microscopy was used to image the encapsulated ICG within electro spun nanofibers and ICG uptake by MIA PaCa-2 pancreatic cancer cells. The stability of encapsulated ICG is demonstrated by the in vitro release profile up to 21 days. These results suggest the potential of the ability of internalization and accommodation of encapsulated ICG into the pancreatic cell cytoplasm

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