**Near Infrared** 

(650-1000 nm)

light source

## Synthesis, Characterization, and Nanoencapsulation of RosIndolizine-based Fluorescent Probes

Fluorescence imaging in the shortwave infrared (SWIR) spectral region has potential for biological applications

> **SWIR** emission light (1000-2000 nm)

> > **Injection of** SWIR emitterencapsulated nanoparticles

However, there is a paucity of fluorescent probes in the SWIR region

The dyes, <sup>Ph</sup>RosIndz and <sup>tol</sup>RosIndz, were synthesized with 60 and 63% yields, respectively

Both dyes ( $\lambda_{max}^{em}$ : 1097 nm) were stable and exhibited similar emission profiles

High (>90%) cell viability and low toxicity observed for human embryonic kidney (HEK)-293 cells exposed to nanoparticle-encapsulated dyes

SWIR emissive RosIndolizine dyes with nanoencapsulation in water soluble dendrimers Delcamp et al. (2021) | RSC Advances | DOI: 10.1039/d1ra05479a

## RSC Advances

## Can xanthene-based fluorescent dyes be synthesized and nanoencapsulated for SWIR-based bioimaging?





<sup>Ph</sup>RosIndz and <sup>tol</sup>RosIndz are biocompatible fluorescent probes with SWIR-based imaging applications



