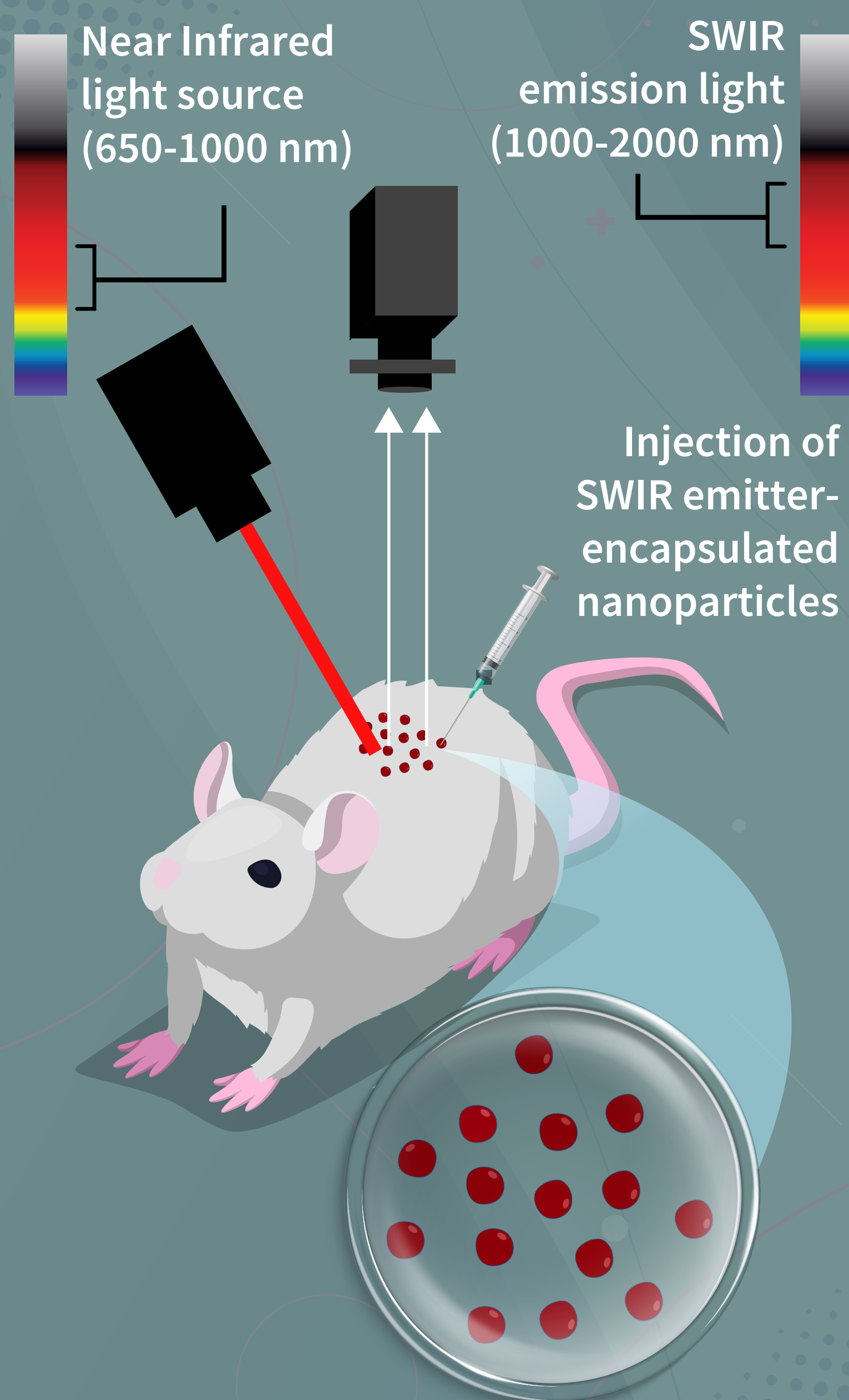


Synthesis, Characterization, and Nanoencapsulation of RosIndolizine-based Fluorescent Probes

RSC
Advances

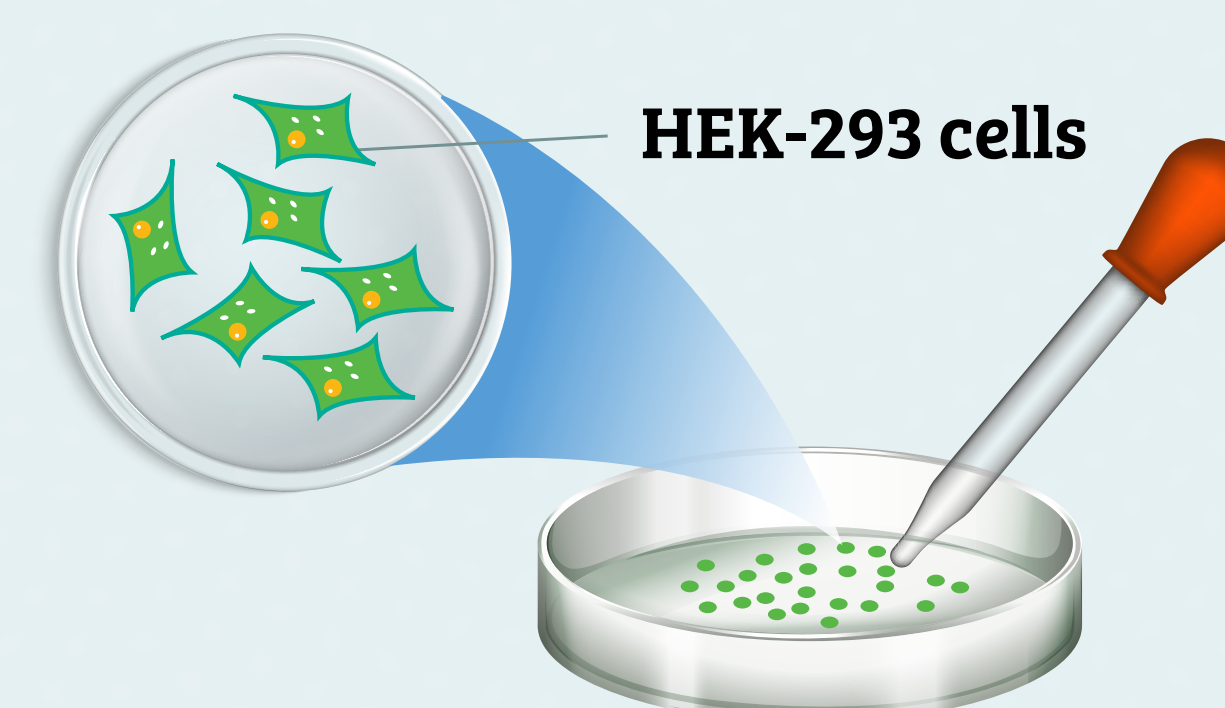
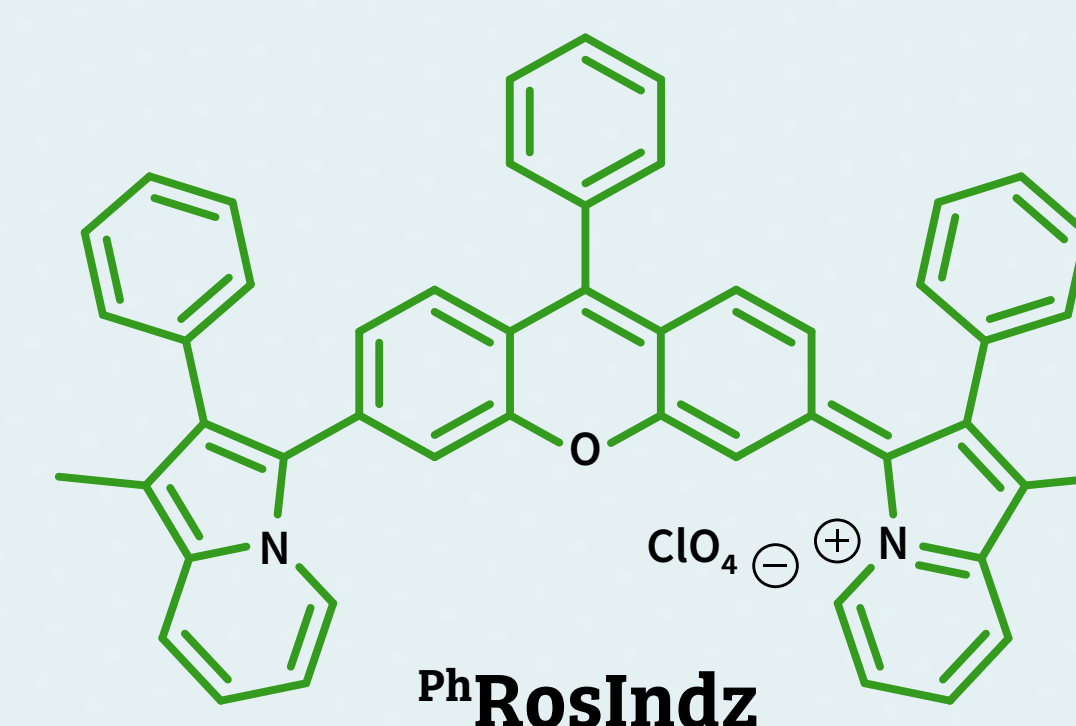
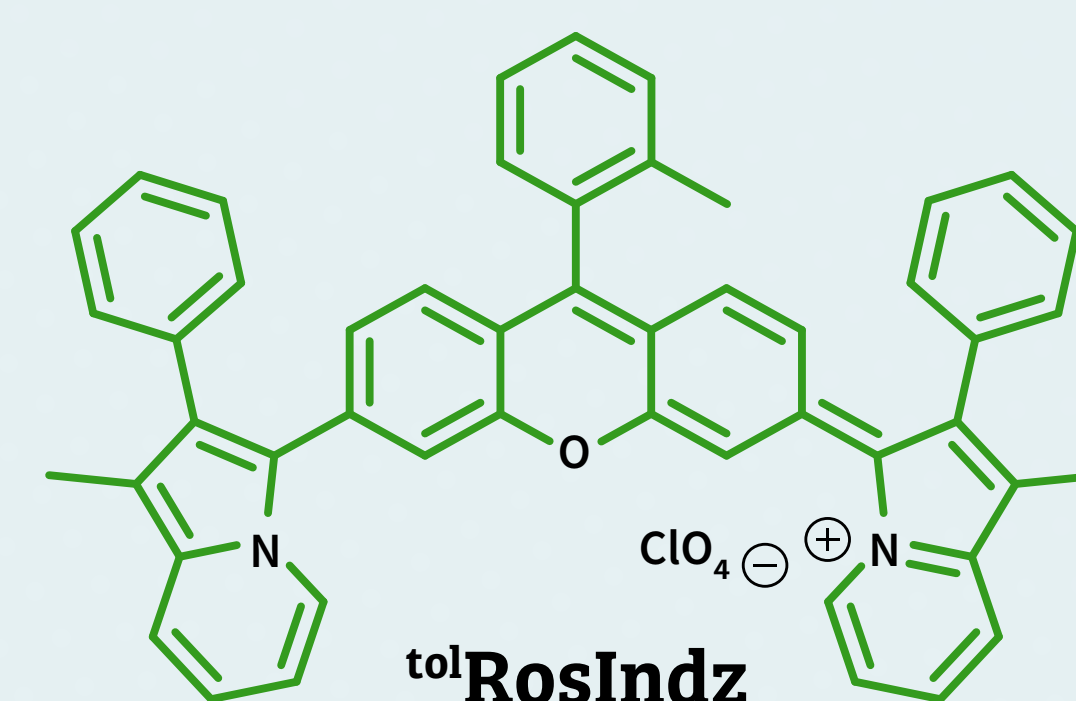
Fluorescence imaging in the shortwave infrared (SWIR) spectral region has potential for biological applications



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

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

- ✓ The dyes, ^{Ph}RosIndz and ^{tol}RosIndz, were synthesized with 60 and 63% yields, respectively
- ✓ Both dyes ($\lambda_{\text{max}}^{\text{em}}$: 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



^{Ph}RosIndz and ^{tol}RosIndz are biocompatible fluorescent probes with SWIR-based imaging applications