

HIGHLY STABLE NON-LIPOSOMAL FLUORESCENT NANOVESICLES AS BIOIMAGING TOOL

The Need

The biomedical application of Indocyanine Green as a fluorescence imaging contrast is limited by some drawbacks. It has been loaded to nanostructures to offset these disadvantages. However, fluorescent nanoparticles present some challenges for their applicability.

The Solution

Our approach to overcome those challenges is through the use of highly monodisperse and stable small unilamellar vesicles called Quatsomes. We have synthesized for the first time quatsome nanovesicles loaded with Indocyanine Green for their application in the bioimaging field.

Innovative Aspects

High efficacy as contrast agent

High brightness

Stable: through the encapsulation of ICG into quatsomes a total protection from chemical degradation is achieved.

- Photostability, low photodegradation

- Colloidal stability, maintaining their nanoscopic structure in formulation over time

- Very high aqueous stability

- Stability over time

Could Increase the available imaging time during fluorescence-based image-guided surgery

Stage of Development: Research and Development

Intellectual Property

European patent application (Priority date: February 5, 2026)

Suitable for International extension (PCT application)

Available for:

- Licensing
- Further development

Contact details