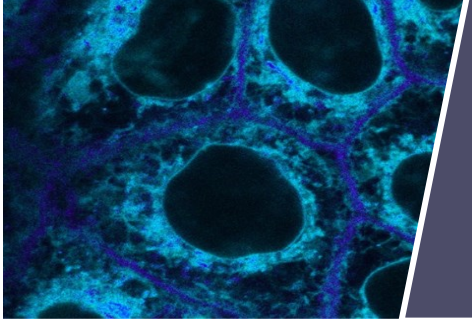
TECHNOLOGY OFFER

Fluorescent probe for lipid membranes

Lipids assay, quantification of membrane fluidity, imaging, cytometry



REFERENCE	DIOLL [D02474]
KEYWORDS	LIPID MEMBRANE / FLUORESCENT PROBE / MEMBRANE FLUIDITY / QUANTITATIVE ASSAY / IMAGING

APPLICATIONS

Lipid membrane analysis:

- Quantitative assay of lipids
- Membrane fluidity measurement
- Biological material imaging

Diagnosis tool:

- Pathologies' diagnosis and development
- Therapeutic molecules screening

TARGET MARKETS

- Life sciences reagents suppliers
- Cytometry instruments providers
- Medical, pharmacology

Technology readiness level

TRL 3 → TRL 4-5 in 2021

INTELLECTUAL PROPERTY

Patent pending

RESEARCH TEAMS

Institut de Chimie et Biochimie Moléculaires et Supramoléculaires (ICBMS) and Centre de Recherche en Cancérologie de Lyon (CRCL)

CNRS, UCBL, INSERM, INSA, CPE, CLB, HCL, University of Lyon

DESCRIPTION

DIOLL is a molecule inserting spontaneously in biological membranes and generating a **specific, quantitative and qualitative fluorescence.** DIOLL is an excellent probe for biological analysis, being fluorescent only after incorporation in a lipid membrane and showing **good stability towards photobleaching.**

COMPETITIVE ADVANTAGES

✓ **Assay kit** for **lipid membranes** in biological samples, substitute to Stewart's method.
- Quantitative lipids analysis with fluorescence
- LD 0,4 µg/mL ; LQ 1,2 µg/mL
- No lipid extraction: time savings (30 min *vs* 4 hours)
- No need for other reagent or toxic solvents

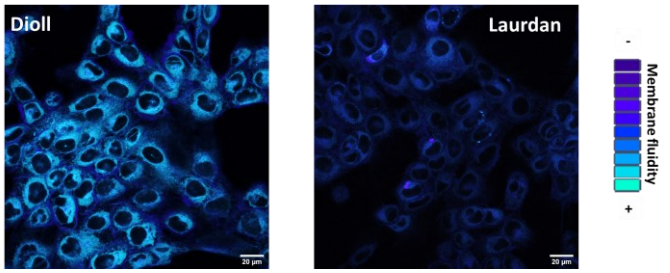
✓ **Microscopy kit** for **membrane fluidity** measurement with **DIOLL**, more efficient than Laurdan.
- Fluorescence intensity of labelled liposomes x7 vs Laurdan
- Sensitivity and precision increased vs Laurdan
- Homogeneous, efficient and reproducible incorporation in all kinds of biological membranes : cells (including fixed cells), liposomes, viruses, vesicles, GRAM- bacteria
- Lipid droplets are not labelled with DIOLL
- Quantification of membrane fluidity and intra / inter-samples variations
- Cell clusters biphotonic imaging available

DEVELOPMENT

- **Assay kit** for lipid membranes, **ready to use**, including macro for data processing
- **Microscopy kit** for membrane fluidity measurement, **ready to use**, including automated image processing
- **Separation kit** for vesicles in preparation

PARTNERSHIP

PULSALYS is looking for industrial partners for the commercialization of DIOLL.



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