HIGHLY FLUORESCENT BIOCOMPATIBLE QUANTUM DOTS FOR *IN VITRO* IMAGING OF LIVING GLIOBLASTOMA CANCER CELLS

Patricia M. A. Farias[1,2,3*], André Galembeck[1,2], Raquel Milani[2], Arnaldo C. D. S. Andrade[1], Andreas Stingl[3].

1. **Federal University of Pernambuco – UFPE – Recife – PE – Brasil, 50670-901;**
2. **Regional Center for Strategic Technologies – CETENE – Recife – PE, Brasil, 50740-540;**
3. **Phornano GmbH, 4n – Korneuburg – Austria, 2100.**

KEY-WORDS: living cells, bioimaging, quantum dots, glioblastoma.

ABSTRACT:
Semiconductor quantum dots (QDs) synthesized in aqueous medium and functionalized with polyethylene glycol were used as fluorescent probes. They label and monitor *in vitro* living healthy and cancer brain glial cells. QDs´ physicochemical characterization was performed and they underwent toxicological investigation by *in vivo* short and long-term inhalation assays in animal models. Healthy and cancer glial living cells were incubated in culture media with biocompatible PEG functionalized QDs. Labelled cells kept their normal activity for same period as non-labelled control samples.

*corresponding author: pmaf@ufpe.br