



## Two Publications Describing Nanocarriers for Systemic Administration by In-Cell-Art researchers

**Nantes – France, 30<sup>th</sup> of January, 2013** – In-Cell-Art, a biotechnology company specializing in nanocarrier technologies called Nanotaxi® for macromolecules delivery (DNA, RNA, Protein), announces the publication of two articles concerning DNA nanocarriers for intravenous administration in healthy mice and in a human glioma model mice in collaboration with academic researchers.

Those articles appear in Molecular Therapy- Nucleic Acids and The Journal of Gene Medicine and can be found online at:

Molecular Therapy- Nucleic Acids (open-access)

<http://www.nature.com/mtna/journal/v2/n1/full/mtna201256a.html>

The Journal of Gene Medicine (abstract)

<http://onlinelibrary.wiley.com/doi/10.1002/jgm.2683/abstract>

The first article presents the design of different DNA nanocarriers consisting of new multimodular systems, and the effects of active targeting of the asialoglycoprotein receptor using galactose as a ligand and passive targeting on the properties of these DNA nanocarriers. Two nanocarriers with the best prolonged circulation profile are tested in healthy mice to assess their toxicity and distribution profile, which confirms the successful targeting of liver.

Besides, those DNA nanocarriers are used to deliver plasmids encoding the herpes simplex virus thymidine kinase for a systemic treatment of glioma and results are reported in the second article.

Bruno Pitard, co-founder of In-Cell-Art, said “Those studies highlight the potential use of some of those DNA nanocarriers to develop gene therapies for glioma or other type of cancers. As a specialist of delivery of macromolecules, In-Cell-Art continually strives for the development of better nanocarriers for innovative therapeutics”.

### About In-Cell-Art

In-Cell-Art (ICA), which is headquartered in Nantes (France) is a biopharmaceutical company specializing in the preclinical and pharmaceutical development of nanocarriers named Nanotaxi® for macromolecular drugs. Its founder and research team, which includes a Nobel Laureate, have designed new classes of vectors that are organized on a nanometric scale, which enables them to cross the cell barrier efficiently and safely. In-Cell-Art offers a range of reagents and biotechnology development services:

## **1. ICANTibodies™**

In the absence of recombinant antigen, ICANTibodies™ allows, from an in silico DNA antigenic sequence, the production of the most ambitious functional antibodies against any natively expressed nuclear, cytoplasmic, secreted or membrane proteins. ICANTibodies™ has allowed, in less than 2 years, the production of more than 250 different functional antibodies. In-Cell-Art has worked with a number of pharmaceutical firms (Sanofi, GlaxoSmithKline, Geneuro etc.) and public research institutions and universities (Institut Cochin, Cancer Research UK, Institute of Neurology UK etc).

## **2. ICA Nanotaxi®**

- DNA Vaccine

ICA614 Nanotaxi®, an innovative DNA synthetic formulation, offers unique efficient and industrial features such as the dramatic enhancement of the immunogenicity of plasmid DNA-encoding tumours or pathogen-derived antigens, a reduction in the dose of plasmid DNA, as well as an excellent safety profile. ICA614 Nanotaxi® represents a crucial step in DNA vaccine development, and is currently being tested by major vaccine companies (Sanofi-Pasteur, Merial etc.).

- mRNA Vaccine

Some other ICA Nanotaxi® are also being assessed in \$33.1 million RN-ARMORVAX consortium, co-funded by US Defense Advanced Research Projects Agency (DARPA). The consortium would validate the new application of ICA Nanotaxi® for mRNA-based vaccines for infectious diseases in collaboration with CureVac and Sanofi-Pasteur.

## **3. ICAFectin® transfection reagents**

ICAFectin® transfection reagents are innovative breakthrough synthetic vectors for in vitro nucleic acid delivery. They are becoming the reagents of choice for efficient DNA and siRNA transfections as demonstrated by their increasing use in numerous studies published in high impact factor journals including Journal of Biological Chemistry, Nucleic Acids Research, PLOS ONE, PLOS Pathogen, Human Gene Therapy and more.

In-Cell-Art is a privately held company, which was founded in 2005. It is a member of the Atlanpole Biotherapies high-tech cluster of biotechnology companies in western France.

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