



In-Cell-Art announces the publication of an invited-chapter in the new edition of Comprehensive Supramolecular Chemistry II.

Nantes – France, 31st of August 2017 – In-Cell-Art (ICA), a biotechnology company specializing in nanocarrier technologies named Nanotaxi® for unlocking the promise of nucleic acids to treat acquired or inherited diseases, announces today the publication of an invited-chapter entitled Supramolecular Gene Transfection Agents in *Comprehensive Supramolecular Chemistry II*, second edition, published by Elsevier*

This new edition of *Comprehensive Supramolecular Chemistry II*, two decades after the first edition, reflects the work of researchers in organic, inorganic and physical chemistry with some biological influence. The new edition is also included in the Elsevier Reference Module in Chemistry, Molecular Sciences and Chemical Engineering and on ScienceDirect.

The chapter *Supramolecular Gene Transfection Agents* describes the different classes of nucleic acids delivery systems reported in the literature, that depend not only on the nucleic acids to be transported but also on the intended use, either for in vitro, in situ or systemic applications. The chapter presents also the progress towards the clinic.

Bruno Pitard, a founder of In-Cell-Art describes: “It is an honor to contribute to this chapter to reflect in the past two decades how the field of supramolecular chemistry has changed a great deal and in the particular in the field of nucleic acids synthetic delivery systems recognized from the beginning as the major issue for the future development of this novel class of medicine to treat acquired or inherited diseases. Also, we are pleased to be recognized as having a scientific contribution in the field of supramolecular chemistry for nucleic acid delivery.

* Pitard B et al. *Supramolecular Gene Transfection Agents*. Comprehensive Supramolecular chemistry II, Volume 5, 2017 pages 365-389.

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 3 years, the production of more than 300 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.

•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.

•mRNA Replacement Therapy

Some other ICA Nanotaxi® are also developed to improve the limited efficacy and stability of mRNA therapeutics, leading to the dramatic increase in therapeutic protein expression without DNA-encoded gene.

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, Cell reports, EMBO J and more.

In-Cell-Art is a privately held company, which was founded in 2005, laureate in 2013 and 2013 of the Fast 50 Deloitte award. It is a member of the Atlanpole Biotherapies high-tech cluster of biotechnology companies in western France.

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